



# Elektrobit

*Business Operations 2004*







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## *Business Operations 2004*

### *Pioneer in Wireless Technology*

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## *Pioneer in Wireless Technology*

*Elektrobit: A versatile engineering company specializing in wireless technologies. 1500 employees, including 1100 R&D engineers. From R&D to product-service concept. Customers are leading global industry companies. Worldwide operating network in 14 countries. Net sales 2004 MEUR 203. Listed on the Helsinki Exchanges.*



# Elektrobit

Elektrobit specializes in wireless technology - the design and life-cycle testing of electronic products, as well as in production automation. Elektrobit Group is a versatile engineering company, which, in addition to its design services, develops, sells and markets its own technologies and products to customers.

The company's customers include the telecommunications, automotive, defense and space, industrial automation, and well-being and medical industries. Elektrobit Group's business comprises three business units: Contract R&D, Testing and Automation Solutions.

## Contract R&D

Contract R&D business unit works as a product development partner for companies that use wireless technologies and need high tech solutions and outsourcing services.

Contract R&D aims to offer product development services to companies that work with wireless products and have their own distribution and marketing organizations. The division's business consists of product development services and clearly segmented wireless products that support product development.

Design and expert services are offered in the following sectors, among others:

- smartphones and other mobile devices
- base stations for mobile phone networks
- navigation systems for the automotive industry
- telecommunications systems for the defense industry
- wireless solutions for the well-being industry

## Testing

Testing business unit is a provider of testing solutions for the telecommunications industry, particularly for testing mobile terminals and mobile phone networks. The business unit aims to improve the cost-efficiency of its customers' testing processes over the life cycle of their products, as well as to develop more competitive products and services for customers in the telecommunications sector.

The unit's business idea is to sell products, systems and services that fulfill the testing and measurement needs of R&D, production and end-users.

Fields of know-how within Testing include:

- mobile terminal and network testing
- production, service and field testing
- radio channel testing and simulation

## Automation Solutions

Automation Solutions business unit designs, manufactures and markets production automation systems for the individual mass production needs of the electronics industry. The unit aims to improve the competitiveness of customers engaged in high-volume production.

The division's products consist of production equipment for the electronics industry manufactured under the JOT Automation brand, such as material handling, processing and assembly equipment, including services related to system design, implementation and maintenance.

The business unit's fields of know-how include:

- circuit board processes for automotive, consumer and industrial electronics
- assembly systems for the telecommunications industry
- assembly solutions for mechanical manufacturing

**Net sales by business unit**

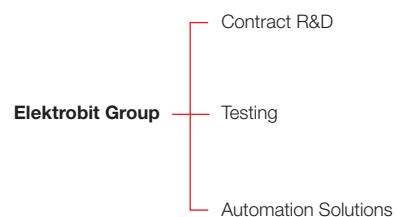


Contract R&D	44%
Testing	44%
Automation Solutions	12%

**Net sales by market area**



Europe	69%
Americas	18%
Asia	13%



## 2004 in Brief

*Net sales and operating profit increased from the level of 2003.*

Net sales amounted to 202.6 million euro (148.6 million euro, increase 36.4%) and the operating profit stood at 33.2 million euro (16.1 million euro, increase 17.1 million euro).

*Capital structure strengthened.*

The equity ratio at year-end 2004 was 63 per cent. Net gearing was -23.8 per cent. Cash flow from operations stood at 45.3 million euro.

*Long-term development and continuity secured.*

The Group added resources to sales, marketing and competence development, as well as to research and development in accordance with its established targets.

*Seeking growth through strategic acquisitions.*

Competence and customer contact were expanded through three acquisitions. These generated 19.5 million euro of net sales, which is approximately 9.6% of consolidated net sales.

*Share price increased.*

Elektrobit Group Plc.'s share price quoted on Helsinki Exchanges increased by 9.8 per cent during the period under review, the trading volume was bigger and the company's market value at the end of 2004 was 362.4 million euro (321.6 million euro).

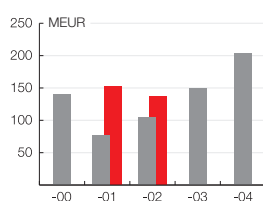
*Board of directors proposes distribution of profit.*

The Board of Directors of Elektrobit Group Plc. proposes that dividends of 0.012 euro per share, a total of 7 764 761.40 euro shall be paid.

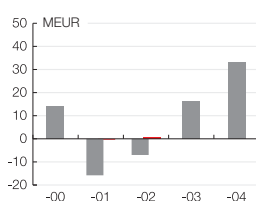
### Key figures

	Official 2004	Official 2003	Change %
Net sales, MEUR	202.6	148.6	36.4%
Operating profit, MEUR	33.2	16.1	
Operating profit, % of net sales	16.4	10.8	
Profit before taxes, MEUR	32.9	13.8	
Net profit, MEUR	23.3	8.1	
Shareholders equity, MEUR	107.2	80.4	33.4%
Balance sheet total, MEUR	175.0	142.3	23.0%
Cash flow from operations, MEUR	45.3	21.6	
Personnel at the period end	1 536	1 088	41.2%
Return on investment, % (ROI)	29.4	16.4	
Interest-bearing net liabilities, MEUR	-25.8	1.9	
Net gearing, %	-23.8	2.3	
Equity ratio, %	63.0	58.6	
Earnings / share, EUR	0.0364	0.0129	

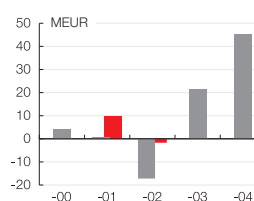
**Net sales**



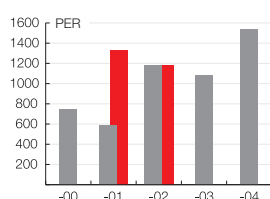
**Operating profit**



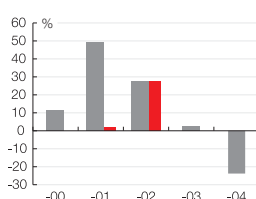
**Cash flow from operations**



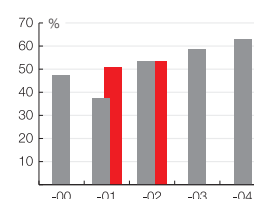
**Personnel**



**Net gearing**



**Equity ratio**



■ Official  
■ Pro forma

## Operating Environment

*Business environment remained challenging.*

The predictable period is short and therefore assessing the development of operations was difficult for the entire year.

*Sales volume in mobile devices market increased by about 29%.*

The number of new players in the mobile communications sector, as well as the number of mobile terminal models and variations, is going to continue to increase. The number of mobile device users increased to over 1.7 billion. The sales volume of smartphones continued to increase substantially.

*Customers seeking cost-effective solutions.*

The downward trend in average prices imposes challenges with regard to the improvement of product development efficiency. The suppliers of telecommunications products seek cost-effective solutions that improve their competitiveness in a rapidly changing operating environment.

*Trend in network business changed to incipient growth.*

Operators are boosting their investments in network capacity in the Western world, as well as in new investments in the developing markets of Latin America and Asia.

*Share of electronics and software in cars growing.*

The use of wireless technologies and the number of infotainment applications is increasing. The share of software in cars is growing substantially.

## Contract R&D

*Business environment recovered.*

Net sales in 2004 amounted to 89.1 million euro (58.8 million euro), which was in line with the established targets. Development in the Americas was positive. Net sales in comparison with the previous year were improved in part by the consolidation of 3SOFT GmbH and the CIM Technologies Group with the business unit during March 2004.

*Strengthened market position in the automotive industry.*

The acquisition of a majority holding in 3SOFT GmbH makes it possible for 3SOFT GmbH and Elektrobit Group to achieve an even more significant position in the expanding software market for the automotive industry.

*Smartphone product development volume increased.*

The Contract R&D business is dominated by the sales of product development services and comprehensive projects associated with mobile phones. The focus was on smartphone products and associated design services. The volume of product development associated with mobile phone base stations increased slightly on the previous year.

## Testing

*Annual periodic variation of demand was concentrated to the second half of the year.*

Net sales for 2004 amounted to 88.3 million euro (67.9 million euro) and increased more than expected. The third and fourth quarters saw seasonal deliveries of production testing equipment.

*Increasing number of product variations affected growth.*

Deliveries of testing and simulation equipment for product development increased significantly on the year 2003. The delivery volumes of product-specific testing solutions increased. Deliveries of testing and optimization equipment for mobile phone networks exceeded the 2003 level. Service business operations associated with testing developed as planned.

## Automation Solutions

*Business environment remained challenging.*

Net sales in 2004 amounted to 25.1 million euro (21.9 million euro), which was in line with the plans. The operating environment was difficult, particularly in the first half of the year and oversupply means that price competition in the industry is still intense.

*Improved preconditions for business.*

The production and R&D operations of the Automation Solutions business unit were centralized in Kuopio and Tallinn. The other units focused on customer relationship management in accordance with their new roles.

*New products on the market.*

During 2004 the business unit delivered the first new-generation routers and laser markers and launched them globally. According to the strategy, sales, maintenance and some project engineering were moved closer to the customer.



## Year 2004

*We must be satisfied with the development of Elektrobit Group in 2004. We were able to outperform the established financial targets and proceeded as planned with regard to the functional targets set for the Group's long term development. Net sales increased by approximately one-third and our operating profit doubled. All the business units increased their net sales and improved profitability in comparison with 2003.*

## CEO's Review

The business environment of our industry remained similar to that of 2003. The mobile terminal sales volume, number of new players and number of models and variations designed continued to increase. The number of smartphone models and the delivery volumes increased as well. These issues particularly affected the demand for product-specific testing and automation equipment for product development as well as production. Business associated with mobile phone networks regained an upward trend, which had a positive effect on the demand for mobile phone network testing equipment and product development related to mobile phone base stations. The share of software and electronics in automotive product development is increasing. Within Elektrobit Group, the automotive industry became a significant sector in addition to the telecommunications industry. The Group's business grew in production automation equipment for automotive electronics, as well as in software developed for cars.

Elektrobit Group continued to make investments in selected strategic focus areas:

*Co-operation in the smartphone sector was extended and deepened with Nokia, Symbian and semiconductor manufacturers, among others.*

The CIM Technologies group acquired in March strengthened and supplemented our software competence in smartphones and production testing. We initiated the design effort for Elektrobit Group's own reference phone, which will contribute to speed up the development of smartphones for Series 60 licensees.

*The Testing business grew significantly in all its sectors.*

Investments in the development of testing products for mobile terminals and networks were continued in line with the strategy.

*The use of new wireless technologies and the number of infotainment applications in cars is increasing.*

The acquisition of a majority holding in 3SOFT GmbH

in March 2004 makes it possible for Elektrobit Group to achieve a more significant position in the expanding productization service market for the automotive industry. *The Group was strengthened by three acquisitions,* the last one of which was the acquisition of a majority holding in PJ Microwave Oy in November. This acquisition strengthens the Group's competence in microwave technology.

In order to achieve a market leader position in our strategic areas, we must continue to systematically develop our products, services and processes. Therefore, the 2005 budget for research and development in these areas is larger than before. Even though our growth in 2004 clearly outperformed the industry, organic growth alone is not enough to elevate us to the targeted level. We will actively aim for growth through acquisitions as well. Our strong balance sheet provides good opportunities for this.

Our operating environment forces us to continuously change. The changes and efficiency measures taken from 2002 to 2004 aim at long-term development in line with our values. The level of earnings achieved in 2004, our stronger balance sheet and our expanded customer base and competence provide good foundations for pursuing the challenges set for the upcoming years.

I wish to thank our customers for their trust in our company, as well as our shareholders for their encouragement to continue long term operations in line with our values. I am proud of the professional skill and results achieved by Elektrobit employees and wish to express my warmest thanks.

I would also like to use the opportunity to wish Juha Hulkko success in his new task, as he is going to return to the position of Elektrobit Group's CEO as of March 17, 2005.

JUHA SIPILÄ, CEO





## *Our Civil Responsibilities as a Good Corporate Citizen*

*Elektrobit bears its responsibilities as a part of society wherever it operates. Because the success of a business is essentially based on the success of the surrounding society, Elektrobit is involved in the development of society in an appropriate role and task.*

## Guiding Principles

- Mission** *Elektrobit makes a positive impact on society through comprehensive productization solutions (efficient R&D and flexible testing and production automation), which enable its business customers to produce high quality, affordable products and services based on the principles of sustainable development.*
- Vision** *Our objective is to be a leading supplier of productization solutions and a leading technology partner behind the best brands of the selected industry areas.*
- Values**
- *We take on our civil responsibilities as a good corporate citizen*
  - *We build customer relations based on trust and long-term partnerships*
  - *Our actions are dictated by honesty and justice, and by mutual respect*
  - *We aim to be very profitable so that we can grow and develop whilst maintaining our strong balance sheet status*
  - *We want to be among the leading companies of the industry in expertise and technology*
  - *We work with persistence*

## Strategy in Practice

According to the strategy updated in 2004, Elektrobit Group's long term targets include:

*To grow faster than the telecommunications industry on average.*

The average annual growth from 2002 to 2004 was approximately 22%. The company believes that it is also capable of growth outperforming the average in the long term.

*To expand the customer base in telecommunications and other industries by offering a productization solutions with product development services as the spearhead.*

Elektrobit gained new telecommunications customers during 2004. The Symbian and Series 60 co-operation platforms provide a good opportunity to find new customers. After the 3SOFT acquisition, approximately 10% of the Group's net sales originate in the automotive industry.

*To pursue the leading position among smartphone development partners through the company's ODE business model and, together with partners, through the ODM business model.*

During the period under review Elektrobit expanded and deepened its Series 60 software platform partnership with Nokia (the Series 60 Boutique business model), announced its participation in the development of a new smartphone product platform with Nokia and Texas Instruments Incorporated, and expanded its Symbian OS™ partnership agreement to cover the Symbian Independent Design House (IDH) concept. For example, Elektrobit will develop a family of Series 60 phones in co-operation with Lenovo Group Limited of China.

*To pursue a leading position in testing mobile phone terminals and networks by strengthening the product offering, technology and customer base.*

The focal point of R&D investments in the area of production testing was in the development of new types of testing products. These are associated with among other things, service testing of mobile phones and product-specific production testing. With regard to testing and simulation equipment for product development, as well as mobile phone network testing, R&D efforts focused on extending the current product ranges.

*To strengthen the market position in automotive infotainment applications, real-time car control systems and electronic production automation.*

The acquisition of a majority holding in 3SOFT GmbH of Germany makes it possible to achieve a more significant position in the expanding productization service market for the automotive industry.

*To strengthen the company by investing in new products and competence, both through acquisitions and strategic alliances.*

Resources were added to sales, marketing, competence development and R&D operations. Within research and development operations, the focus has been on concentrating competence at the Group level, creating a synergy advantage. Three acquisitions were completed during the period under review.



With regard to testing and simulation equipment for product development, as well as mobile phone network testing, R&D efforts focused on extending the current product ranges. The picture shows the Prosim FE Air Interface Emulator.

# Development Trends

## Mobile Communications Trends

*The number of mobile devices increases – competition in the industry intensifies*

- A growing number of players, product variants and applications
- Asian companies deliver more and more phones in the lower price brackets
- The decrease in average mobile device prices means challenges for the improvement of product development efficiency
- The number of phone platforms and reference designs increases

*The number of smartphones increases*

- The share of open operating systems such as Symbian and smartphone platforms such as Series 60 increases. Open operating systems will expand to the medium price brackets as well

*The share of mobile phones produced through the ODM (Original Design and Manufacturing) model increases*

- The ODM model is employed to achieve low production costs using standard components and fairly low R&D effort

*Southeast Asia is an important market*

- A significant number of new phone users in the upcoming years will be from Asia, and the number of replacement purchases is increasing
- The phone product development volume will increase, in addition to the manufacturing volume

## Network Business, Automotive Industry and Defense Forces

*Wireless network business is expected to increase in the coming years*

- The investment volume has increased in developing telecommunications countries such as India and Brazil
- Network optimization is increasing in developed countries
- 3G services have been commercially available since 2004 more significantly

*Industry and the defense forces use more wireless technologies in their applications*

- The technologies used in the applications are required to be secure and reliable

*Automotive electronics*

- The volume of automotive software in the infotainment and navigation sectors will grow, and the amount of safety critical software is increasing

## Elektrobit Group's Main Growth Factors

*Outsourcing is on the increase*

- The owners of telecommunications brands and OEM providers seek cost-efficient solutions to improve their productivity in constantly changing conditions

*Increased sales volumes and variations of mobile terminals*

- The sales volume grew from 470 million units in 2003 to more than 640 million in 2004. It is estimated that growth will slow down in 2005

*The number of mobile terminal variations increased*

- The number of smartphones is on the increase

*Life-cycle testing boosts the introduction of products to the market*

- New technology applications require more testing and optimization
- The improvement of testing processes and added value in testing boost the introduction of products to the market

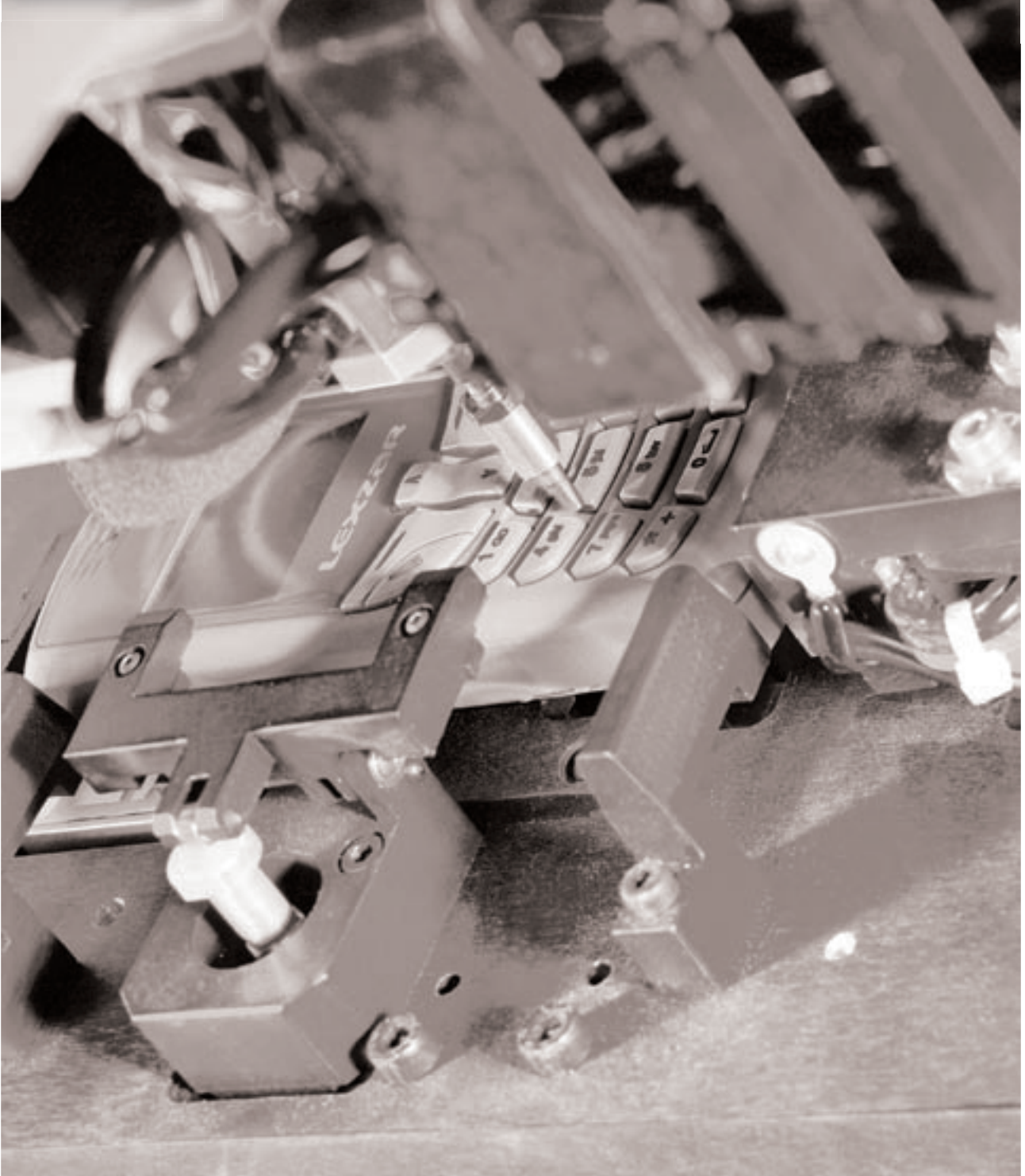
*Digital convergence*

- Digital convergence enables user mobility and flexibility by integrating technology innovations and services



## *Elektrobit - Proactive Solutions Provider*

*A versatile expert partner for demanding product development projects in the telecommunications industry. Supplementing the customer's resources with smart phone design services. Member of the Nokia Series 60 product organization and an official Series 60 Boutique. Solutions for life-cycle testing in the electronics industry. A strong position in the automotive industry through the subsidiary 3SOFT. Long term research on the company's own initiative.*



## Productization Service Concept

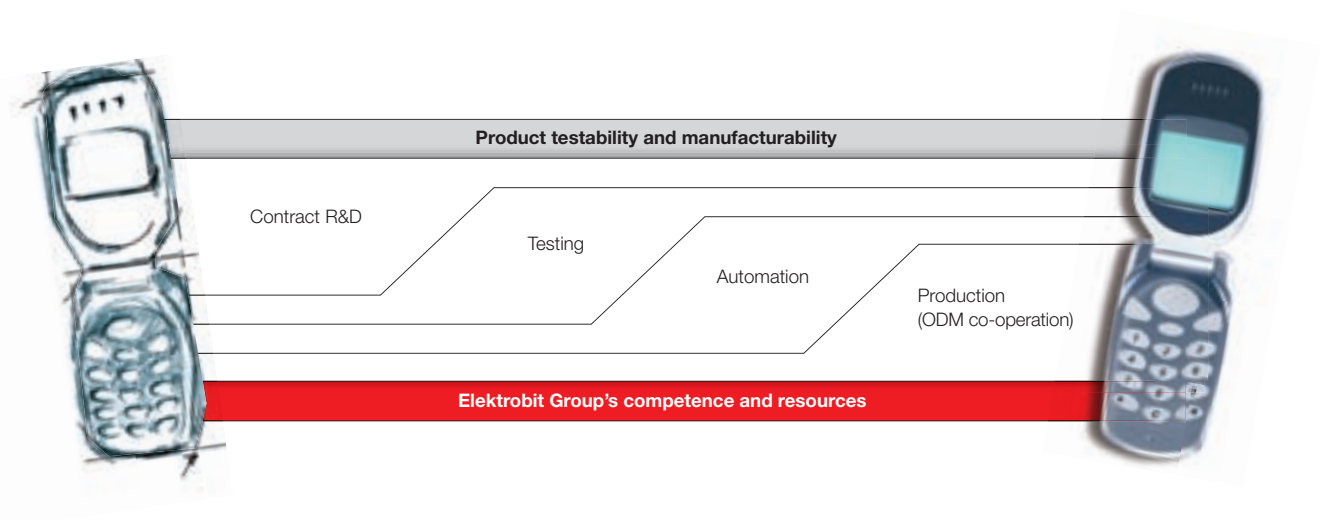
Elektrobit is best known as a versatile expert partner for the telecommunications industry in demanding product development projects. The operations are based on long term confidential customer relationships, and first-class technology competence from product development to production.

Elektrobit Group's main customer group is the telecommunications industry. The Group's objective is to be the leading supplier of productization solutions within this industry and a leading technology partner behind the best brands of the industry.

The productization service concept represents Elektrobit Group's view of an overall product development solution. In accordance with the concept, Elektrobit provides the customer with the entire product development cycle from

design to the production process. The business idea is to improve the competitiveness of the customer's product and production by assuming total or partial responsibility for product development, product design, and the implementation of production and testing solutions. Together with its manufacturing partners Elektrobit is able to respond for the production as well. The productization service concept enables Elektrobit to ensure optimized increases in the production volumes of new products.

By combining its know-how in contract R&D, testing and production automation, Elektrobit offers its customers a unique one-stop-shop product and service entity, which speeds up the launch of serial production, ensures quality and optimizes production costs.



## Partner for Smartphone Design

Elektrobit Group's smartphone design services supplement the customer's own resources by creating a comprehensive set of research and development contract services, testing and production automation solutions. The productization service concept enables an overall solution from product design during the product development process all the way to production. The company's extensive and profound competence in software, hardware and smartphone platforms improves the customer's competitiveness. The objective is to shorten the time-to-market of smartphones and reduce the total costs.

### ODE (Original Design and Engineering)

Elektrobit is a member of the Nokia Series 60 product organization and an official Series 60 Boutique. The Company offers comprehensive design services based on the Series 60 platform. The Series 60 platform is one of the leading smartphone software platforms in the world. Elektrobit has carried out several Series 60 phone projects, including the

Lenovo smartphone, the Texas Instruments reference phone and Elektrobit Group's own reference smartphone, released in February 2005.

Elektrobit is also a Symbian Platinum Partner. As an independent engineering house, the company can provide Symbian OS licensees with comprehensive product development based on the advanced mobile phone operating system established as the industry standard. Symbian is the leading smartphone operating system with an approximate market share of 60%.

### ODM (Original Design and Manufacturing)

Elektrobit provides its customers with flexible production alternatives based on its strong project competence together with a number of carefully selected ODM partners. The alternatives include, among other things, pilot production series, short production series and high-volume production for the global market.



Elektrobit was the first design house to release a family of reference smartphones based on the Series 60 platform. Elektrobit Reference Smartphone will be offered to Series 60 licensees.

## Life-Cycle Testing

Shortening time-to-market is an increasingly important target for original equipment manufacturers. Technologies and electronics products are becoming more complex. Development cycles become shorter as development based on platforms becomes more common. At the same time, the demands for cost efficiency in product development and production continue to increase. New advanced features add challenges to the products in terms of software and attached components, as well as the compatibility and testability of new radio network features (such as 3G). For these reasons the life-cycle testing requirements for the product must be taken into account at the beginning of the design phase.

Life-cycle testing of electronics products covers testing

during research, product development, production and maintenance. Product testability is mainly designed and implemented in the product development phase. Testing is expected to produce added value to product development, production and maintenance at every stage. The weight of different testing stages will change with the development of technology and products; for example, the significance of application testing in mobile phone systems is increasing.

Elektrobit develops solutions for the phases of life-cycle testing and the improvement of efficiency, added value, quality and reliability in productization processes.

Efficient testing methods can have a substantial effect on the success of an electronic product.



The testability of electronic products is mainly designed and implemented in the product development phase. The picture shows a C2 radio channel simulator of the Propsim product range, used in the product development phase for testing the functions of wireless devices in a real operating environment.

## Automotive Industry

Elektrobit has a strong position in the automotive industry through its subsidiary 3SOFT. 3SOFT is one of the leading independent developers of embedded control and service software. The company produces embedded systems for safety-critical needs in the automotive, well-being and industrial automation industries.

Well-known 3SOFT products include the real-time ProOSEK and ProOSEK/time operating systems for time-controlled solutions, the integrated tresos environment for the development of control devices, as well as NaviGuide, an off-board navigation system for mobile phones and PDAs.

3SOFT is also a significant developer of software components

for MMI (Man Machine Interface). Among other things, the company has created a tool-based specification process facilitating MMI implementation.

3SOFT knows the potential and rapidly increasing significance of infotainment applications in the automotive industry. The company boosts the creation of innovation by offering new ways of making multimedia systems and driver assistance systems a part of the vehicle. Profound expertise in MOST bus technology (Media Oriented System Transport) and the development of Java-based telematic applications are examples of the Company's strong commitment to automotive infotainment applications.



3SOFT GmbH's smartphone-based off-board navigation system guides the user with voice output and route shown on display.



## Long Term Research

In addition to customer-driven product development, Elektrobit engages in long term research on its own. Research operations were strengthened in 2004 through the establishment of the Research Steering Group. The steering group coordinates and supports research at the Group level.

Research is focused on data communications and radio technologies for the future. Particular effort has gone into radio channel measurement, modeling and simulation, wireless 4G technologies and Software Defined Radio. In many cases research is conducted in co-operation with Finnish and international universities and research institutions. Elektrobit has established a research laboratory focusing on 4G technology jointly with the Centre for Wireless Communications at the University of Oulu.

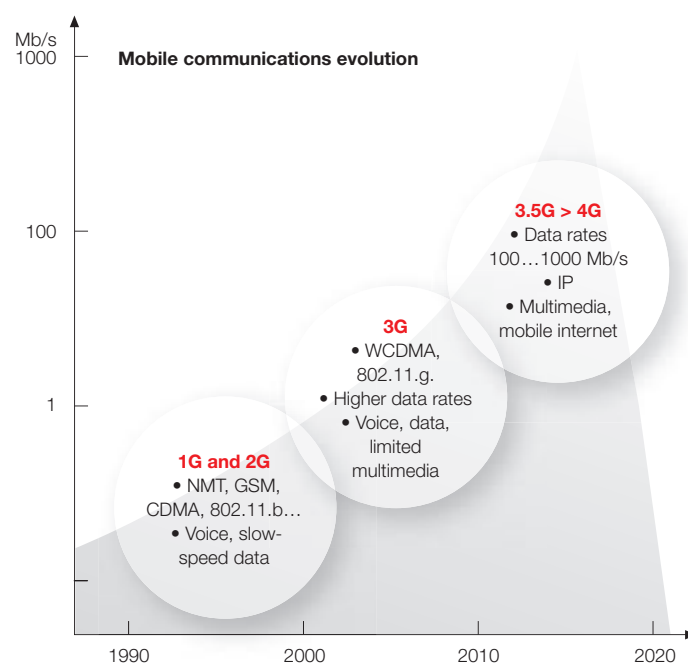
In the field of radio channel technologies, Elektrobit is involved with a large project within the sixth research framework program of the EU (Winner program) researching and specifying a wireless data communication system for the future after 3G. Elektrobit is the leader of the channel

modeling sector in this project.

Elektrobit develops its own testing-related services and products, starting from the quality requirements for the customer products, as well as current and upcoming technology platforms. As technologies and electronics products are becoming ever more complex, it is even more important that the life-cycle testing requirements for the product are taken into account at the beginning of the design phase. Elektrobit develops solutions for the phases of life-cycle testing and the improvement of efficiency, added value, quality and reliability in productization processes.

Development projects in Automation Solutions are focused on improving the flexibility and cost efficiency of equipment and the development of solutions for the needs of new industrial applications (such as the automotive industry).

In the automotive industry sector, long term research and development projects are focused on speech recognition and pattern recognition technologies, navigation solutions and a software platform compliant with the AutoSAR standard.





## *Elektrobit as a Part of Society*

*Ytinen Electronics Oy, part of Elektrobit Group, supplied measurement equipment for the Cassini-Huygens probe of the European Space Agency (ESA) and the U.S. National Aeronautics and Space Administration (NASA), which has traveled for seven years and is currently orbiting Saturn. ESA has been responsible for the Huygens probe that landed on the surface of Titan, the largest moon of Saturn, on January 14, 2005.*



# Responsible Operations

The starting points for responsible operations within Elektrobit Group are the company's vision, mission, values and guiding principles.

Elektrobit bears its responsibilities as a part of society wherever it operates. Because the success of a business is essentially based on the success of the surrounding society, Elektrobit is involved in the development of society in an appropriate role and task. Among other things, social responsibility is based on the principles of the Electronics Industry Code of Conduct, Global Reporting Initiative and the SA8000 electronics industry standard. A social responsibility report will be published on the Company's Internet pages in 2005.

## **Interaction with Interest Groups**

The crucial task of a business is to provide financial well being for its interest groups. At best, businesses and the public sector pursue common good by open co-operation based on partnership and mutual respect.

The customer is the most important external interest group. One of the starting points for operational development in Elektrobit Group is the development of customer satisfaction. We measure customer satisfaction in each project and by means of customer surveys. Feedback received from customers has been taken into account in the company's development operations.

## **Social Responsibility, Investments in Training and Competence Development**

Elektrobit wants to have a reputation for top know-how and hard-working, motivated personnel. This can be achieved by creating the prerequisites for self-development, offering modern tools for our experts, and strengthening the core competencies in a planned way.

Top results are expected from our personnel. At the same time, we care for and support the development of comprehensive life management for everyone. We also

co-operate with local universities and educational institutions in different parts of the world. At its best, involvement in joint development projects will improve both global and local co-operation, as well as the competence of employees.

Job satisfaction is measured annually by means of the Elektrobit Spirit personnel survey. The results of the survey are analyzed in workgroups. Annual performance appraisal discussions serve as one of the starting points for competence development as well. We also develop our compensation systems to observe global and local requirements.

## **Environmental Responsibility**

Environmental responsibility derives from the Elektrobit Group's guiding principles for operation and the applied principles of sustainable development. The environmental management system supports the realization of environmental responsibility and is a part of our management system.

The fundamental principles to be observed have included corporate citizenship in line with our values, as well as monitoring laws and regulations. We also encourage our suppliers and partners to implement environmental management systems.

## **Financial Responsibility**

The crucial task of a business is to provide financial well being for its interest groups. Elektrobit wants to grow faster than the industry. However, profitability is more important than growth. Elektrobit Group believes in entrepreneurship and personal responsibility for results. Core competencies are strengthened to serve as the foundations for upcoming profitable growth. We developed our corporate and organization structure during 2004 to better respond to the challenges imposed by our customers and operations. We have also invested in the development of Group-wide research operations and strengthening of core competencies that cross the boundaries of business units.

## Personnel and Competence

The number of Elektrobot Group personnel increased by more than four hundred experts in 2004. The most intense growth was seen in Germany, where the Group acquired 3SOFT GmbH in March 2004. CIM-Tech Oy and PJ Microwave Oy of Oulu were also acquired during the year.

In addition to acquisitions, the corporate structure was changed by corporate arrangements carried out in Finland during the year, which reduced the number of companies in the Group. Efforts started in 2003 to unify the corporate culture continued during 2004.

Surrounded by change, we have looked after well-being at work in many ways. The means include various occupational health care services, leisure activities and events to which the families of our personnel are invited. The objective of well-being at work is that everyone has the opportunity to be involved in the success and pleasure of work.

### Personnel Development

The business development challenges, personnel development plans and Elektrobot Spirit personnel survey have specified the requirements associated with competence development in more detail.

Management challenges have been addressed in many ways; an example is the Management Training Program, initiated in 2003. The crucial objective of the training program is to focus on the development of Company's management system, and it will be continued in 2005. A supervisor coaching program was also initiated in 2004.

Competence is developed more and more on the basis of business targets. Training has been carried out using our own personnel as well as third-party experts.

### Elektrobot Spirit

The Elektrobot Spirit personnel survey is a part of annual planning and is carried out during the first quarter in all the Group companies.

The Elektrobot Spirit personnel survey communicates the values and guiding principles of the company. It comprises four parts, including

- values and principles guiding operations
- future outlook for Elektrobot Group
- management and supervisor work
- atmosphere survey.

Persistent operations with confidence received praise in the 2004 survey. The results will be utilized for internal development. On the basis of the survey carried out in the first quarter of 2004, we decided to pay particular attention to the flow of information and feedback. In addition to these targets, each of the group companies has chosen a few essential objects for development, which they have started to improve in a goal-oriented way.

### Personnel Structure

The average age among Elektrobot Group's personnel is approximately 34 years. A significant part of the employees, more than 70 per cent, are product development engineers.

The greatest proportional growth in personnel during 2004 was seen in Germany and the US.

Personnel by business unit



■ Contract R&D	.....66%
■ Testing	.....25%
■ Automation Solutions	.....9%

Total 1 536

Personnel by market area



■ Europe	.....90%
■ Americas	.....7%
■ Asia	.....3%

## Development of Management Systems

### Corporate Governance

The company follows the Corporate Governance Recommendation for Listed Companies published by a working group appointed by HEX Plc., the Central Chamber of Commerce and the Confederation of Finnish Industry and Employers, which came into force July 1, 2004. The associated principles are available on the Company's Internet pages.

### Management Guidelines

The purpose of the Management Guidelines is to clarify responsibilities and authorizations within the Elektrobit Group. A clear division of responsibility supports the efficient operations of Company's global service network and improves personnel satisfaction. The Management Guidelines are constantly developed to describe the authorities and responsibilities of the Group's Board of Directors, Executive Board, business management and the Group companies' management and Boards of Directors.

### Risk Management

Elektrobit Group follows a risk management policy approved, from time to time, by the company's Board of Directors. The objective of risk management is to cover risks related to business operations, property, agreements, competence, currencies, financing and strategy.

Risk management aims to systematically identify and recognize business-related risks and to ensure that risks are appropriately managed and monitored. Another objective of risk management is to help the company meet its strategic

objectives and to ensure business continuity. Furthermore, it helps to ensure the safety of personnel, products and services, and to fulfill statutory obligations.

During 2004, the Group developed risk management guidelines to specify the Group's risk management policy, areas of responsibility and everyday management in more detail with regard to risk identification, prevention, measurement and associated instructions.

### Other Management Systems

The Group-level ISO9001:2000 certified management system expanded during 2004 to cover approx. 95% of the Group's personnel. The company's objective is to create a management system that allows seamless integration of the Group-level principles and guidelines with business operations, company-level systems and descriptions.

With respect to quality development, the Group is currently involved in the 6-sigma, CMM-I (Capability Maturity Model - Integration) and SPICE (Software Process Improvement) projects, among others.

The Group's environmental management system was certified in accordance with ISO14001 in March 2004. The environmental management system will be extended to cover the design operations of the subsidiaries as well. Product life-cycle management is included in the business processes as part of the delivery process. Operations in accordance with the ROHS (use of hazardous substances) and WEEE (recycling of electrical and electronic equipment) directives have been developed during 2004 and will be continued in 2005.



#### Elektrobit world wide

**Finland:** Kajaani, Kauniainen, Kemi, Kuopio, Lahti, Oulu, Oulunsalo, Salo, Tampere, Varkaus, Ylivieska

**Europe:** Estonia: Tallinn; France: Quimper; Germany: Bochum, Braunschweig, Erlangen, Oberhaching, Stuttgart; Hungary: Budaörs; Italy: Arezzo; Romania: Timisoara; Switzerland: Bubikon; UK: Scotland

**Americas:** USA: Coppell, TX; Redmond, WA; San Diego, CA

**Asia:** China: Beijing; Japan: Tokyo; Republic of Korea: Seoul; Singapore

## Organization 2005

As of the year 2005, Elektrobot Group Plc. will report in accordance with the International Financial Reporting Standards (IFRS/IAS). The following is a presentation of the Group's business divided into Services and Products Businesses.

### Services Business

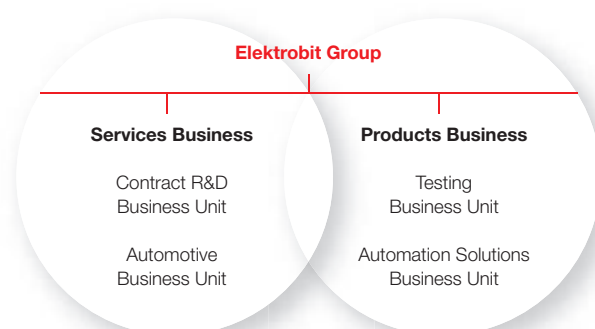
The Contract R&D business unit offers product development services to businesses in the telecommunications sector. The Automotive business unit offers software development services to the automotive industry. The customers of the Service business include the telecommunications, automotive, defense and space, industrial automation, and well-being and medical industries.

The Services business makes use of a common base of competence in different customer projects. The business also includes some products of our own that supplement the services.

### Products Business

The Testing and Automation Solutions business units offer their products and services mainly to businesses in the mobile telecommunications and mobile phone network industries, including the design, manufacture and sale of our own standard products and products customized for each customer.

The business units have a partially overlapping customer base, primarily consisting of mobile telecommunications manufacturers, contract and component manufacturers and operators. The similar operating models of the business units are backed by customer-oriented maintenance and support services.



Elektrobot Group's business is divided into Services and Products Businesses. As of beginning of 2005, Elektrobot Group Plc. will report in accordance with the International Financial Reporting Standards (IFRS/IAS).

# Group Management

## Board of Directors

### JUHA HULKKO | *Chairman of the Board since 2002*

B. 1954, M.Sc (Eng.), eMBA. Founder of Elektrobitt Oy in 1985. President of Elektrobitt Oy 1985-1995. Board member of Technopolis Oyj, Finnet Oyj, Kaleva Kustannus Oy and Oulu Innovation Oy. Juha Hulkko holds 139 520 884 Elektrobitt Group Plc. shares.

### TAPIO TAMMI | *Board member since 2000*

B. 1945, M.Sc (Eng.). President of Gamga Oy since 1999. President of Polar Electro Oy 1985-1999 and Development Director 1983-1985. Chairman of the Board in ProWellness Onlife Oy and Green Rock Oy. Board member of ProWellness Oy and Sinisalo Oy. Tapio Tammi holds 20 700 Elektrobitt Group Plc. shares.

### MATTI LAINEMA | *Board member since 2003*

B. 1939, Doctor of Economics. Chairman of the Board in Tamglass Finton Oy since 2003, Axel Technologies Oy since 2004 and Virvo Oy since 2004. Member of the following Boards: Kohdematkat Kaleva since 2002, Reka Oy since 1995 and John Nurminen Oy since 1989, AW Energy Oy since 2003 and Boardman Oy since 2003. Matti Lainema holds 70 000 Elektrobitt Group Plc. shares.

### EERO HALONEN | *Board member since 2004*

B. 1955, M. Sc (Eng.), eMBA, Executive Vice President, Strategic Resources, Elektrobitt Group Oyj 2002-2003, Managing Director, Elektrobitt Ltd. 1995-2001, Director of the Electronics Department, Elektrobitt Ltd. 1990-1995. Chairman of the Board in Bluepoint Ltd since 2004. Member of the Board in Savings Bank Optia since 2004 and Vice Chairman of the Board since 2005. Member of Haukipudas municipal government and council since 2005. Eero Halonen holds 48 411 077 Elektrobitt Group Plc. Shares.

## Group Executive Board

### JUHA SIPILÄ | *CEO*

B. 1961, M.Sc (Eng.). President of Fortel Invest Oy 1998-2002. President of ADC Solitra Oy 1992-1997 and Vice President 1989-1992. Board member of i.a. Genelec Oy, Tekniseri Oy and Ultracom Oy. Juha Sipilä holds 44 364 481 Elektrobitt Group Plc. shares.

### SEPPO LAINE | *CFO*

B. 1953, Auditor approved by the Central Chamber of Commerce. Director at the Oulu office of the auditing company Ernst & Young Oy 1995-2000. President of Oulun Laskenta Oy 1979-1995. Financial manager of Turun Muna Oy Jaakko tehtaas 1977-1979 and Tammerneon Oy 1975-1977. Seppo Laine holds 11 576 321 Elektrobitt Group Plc. shares.

**EERO TERVO** | *Engineer, Executive Vice President, Logistics and Information Management*, member of Group Executive Board since Feb 1, 2005.

**JOHANN HAAS** | *M.Sc (Eng.) Executive Vice President, Automotive Business Unit*, member of Group Executive Board since March 17, 2005.

### ARTO PIETILÄ | *Executive Vice President, Contract R&D Business Unit*

B. 1958, M.Sc (Eng.), Applied Electronics. Managing Director of Elektrobitt Ltd. 2002-2004, Vice President of Elektrobitt Ltd. Contract R&D 2001-2002, President & CEO of Polar Electro Oy 1999-2001, Executive Vice President of Polar Electro 1996-1999, and assignments in development and technical management in 1980-1996. Arto Pietila holds 890 013 Elektrobitt Group Plc. shares.

### HANNU HAKALAHTI | *Executive Vice President, Testing Business Unit*

B. 1951, PhD (EE). Managing Director of Elektrobitt GmbH 2000-2004, Business Area Manager and Research Director of Elektrobitt Ltd. 1994-2000, Director and Professor of in VTT Computer Technology 1986-1994, and in research and teaching positions in Universities in Finland and abroad 1974-1986. Hannu Hakalahti holds 1 986 527 Elektrobitt Group Plc. shares.

### JUHA REINIKKA | *Executive Vice President, Automation Solutions Business Unit*

B. 1957, M.Sc (Eng.). Director, Sales of JOT Automation Oy 2001-2002. Technical Director of RTS Pretech Oy 1997-2001. Technical Director of Pretech Oy 1990-1997. Juha Reinikka holds 790 846 Elektrobitt Group Plc. shares.

### RITVA-LIISA NISKANEN | *Executive Vice President, Human Resources*

B. 1962, LLM, trained on the bench. Director, Human Resources, of the JOT Automation Group Plc. since 2000. Oulun Osuuspankki, member of OP Bank Group as Development Director in 2000, Branch Director 1996-1999, HR Manager 1995-1996 and Bank Lawyer 1988-1995. Special Adviser to the Prime Minister's Office 1991-1992. Ritva-Liisa Niskanen holds 15 700 Elektrobitt Group Plc. shares.

### JUKKA HARJU | *Chief Operating Officer*

B. 1956, M.Sc (Eng.), M.Sc (Econ.). In Elektrobitt Group since 2000. Managing Director of Tellabs Oy 1994-1999. Vice President of Nokia Telecommunications Oy 1990-1994. Jukka Harju holds 38 198 372 Elektrobitt Group Plc. shares.

### PÄIVI VASANKARI | *Executive Vice President, Legal*

B. 1970, LLM, trained on the bench. Lawyer of Roschier Holmberg Oy 1998-2002. Päivi Vasankari holds 35 000 Elektrobitt Group Plc. shares.



## *Choice of the Long Term Investor*

*The share price and trading volume developed favorably. At the end of the year Elektrobit had approximately 41 500 shareholders, and the proportion of shares held by individuals was about 78%. Releases, reports, earnings estimates, share price monitoring and analyst contacts are available at [www.elektrobit.com](http://www.elektrobit.com). The Annual General Shareholders' Meeting will take place on March 17, 2005 at 12:00 am. in Oulunsalo-talo, Oulunsalo, Finland.*





## Shares and Shareholders

### Shares and the Share Capital

The shares of Elektrobitt Group Plc. are quoted on the Helsinki Exchanges. The Company has one series of shares. All the shares entitle to dividends of equal value. Each share has one vote. The share does not have a nominal value. The Company's shares have been entered into the Finnish Central Securities Depository Ltd's book-entry securities system.

In accordance with the Elektrobitt Group Plc's articles of association the minimum share capital is 2 million euro and the maximum share capital is 20 million euro. Between these limits the share capital can be increased or decreased without changing the articles of association. At the end of the financial period the fully paid share capital of the Company entered into the Finnish Trade Register was 12 941 269.00 euro and the total number of the shares was 647 063 450. The accounting par value of the Company's share is 0.02 euro. The Company does not hold its own shares.

### Share Prices and Trading Volumes

The closing price of the Elektrobitt Group Plc.'s share was 0.56 euro in 2004, the share reached a high of 0.69 euro and a low

of 0.43 euro. During the year, a total of 140.4 million shares with a value of 79.9 million euros changed hands. This is 21.9 per cent of the share capital. Elektrobitt Group Plc's market capitalization at the end of 2004 was 362.4 million euro.

### Trading Codes

Elektrobitt Group Plc. is listed on the Helsinki Stock Exchange since 1998. Trading codes and trading lot:

Hex: EBGIV                      Trading lot: 100 shares

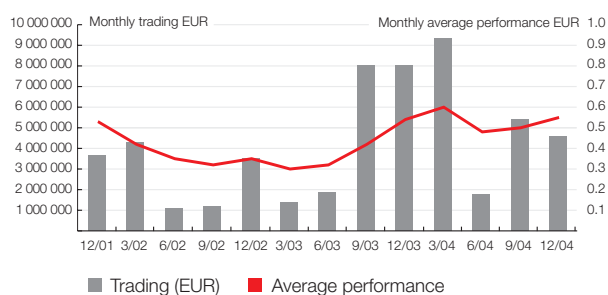
### Shareholders

At the end of 2004, Elektrobitt Group Plc. had 41 543 shareholders. The ten largest shareholders owned 64.1 per cent of the shares. Private ownership was 78.1 per cent. The percentage of foreign and nominee-registered shareholders was 4.7 per cent at the end of the reporting period.

### Shareholding of the Board of Directors and CEO

Shareholding of the Board of Directors, CEO and the companies controlled by them was 36.0 per cent corresponding 232 787 142 shares.

### Trading and average performance 2002–2004



### Largest shareholders, December 31, 2004

	Percentage of shares and votes
Hulkko Juha, Chairman of the Board	21.6
Hilden Kai	8.4
Veikkolainen Erkki	8.1
Halonen Eero	7.5
Sipilä Juha, CEO *	6.9
Harju Jukka	5.9
Laine Seppo	1.8
Head Invest Oy	1.4
Irish Life	1.3
Ilmarinen Mutual Pension Insurance Company	0.9
Other (incl. nominee-registered shares)	36.2
<b>Total</b>	<b>100.0</b>

\* Includes the shares owned by the companies controlled by Juha Sipilä.

## Information for Investors

### Financial Reports 2005

Elektrobit Group Plc. reports its financial development quarterly. In 2005 Elektrobit will publish financial reports as follows:

February 15.	Financial Statements Bulletin 2004
May 11.	Interim Report, January-March
August 3.	Interim Report, January-June
November 2.	Interim Report, January-September

The financial reports will be published simultaneously in Finnish and in English at 8.00 am. on the Elektrobit Group Plc.'s web site [www.elektrobit.com/investors](http://www.elektrobit.com/investors). Company holds press and telephone conferences regarding the reports on a date to be later specified.

### Silent Period

Elektrobit Group Plc. will observe Silent Period prior to announcing its results. The Silent Periods in 2005 are as follows:

January 26. - February 15, 2005
April 20. - May 11, 2005
July 13. - August 3, 2005
October 12. - November 2, 2005

### Annual General Meeting

The Annual General Shareholders' Meeting will take place on Thursday, March 17, 2005 at 12.00 am. in Oulunsalo-talo, Oulunsalo, Finland.

### [www.elektrobit.com/investors](http://www.elektrobit.com/investors)

Press releases, reports, earnings estimates, share price ticker, contact details of analysts and other current investor material can be found on the Company's Internet pages. E-mail based subscription service for press releases and publications can be found on the Internet pages as well.

### Subscription for Press Releases and Publications

Elektrobit Group Plc.  
 Group Communication  
 P.O. Box (Automaatitietie 1)  
 FI-90461 Oulunsalo  
 Finland  
 Tel. +358 40 344 2000  
 Fax +358 8 570 1304  
[investor.relations@elektrobit.com](mailto:investor.relations@elektrobit.com)

Ms. Karoliina Bungarten  
 Communications Coordinator

### Investor Relations

Mr. Edvard Krogius  
 Director, Marketing & Investor Communications  
 Tel. +358 40 344 2000  
 Fax + 358 8 570 1304  
[investor.relations@elektrobit.com](mailto:investor.relations@elektrobit.com)





ELEKTROBIT GROUP PLC.  
P.O.Box 45 (AUTOMAATIOTIE 1), FI-90461 OULUNSALO, FINLAND, TEL. +358 40 344 2000, FAX +358 8 570 1301  
[WWW.ELEKTROBIT.COM](http://WWW.ELEKTROBIT.COM)