

20-F 1 a2082178z20-f.htm 20-F

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WASHINGTON, D.C. 20549

FORM 20-F**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934****For the fiscal year ended December 31, 2001****Commission file number:****WAVECOM S.A.**

(Exact name of Registrant as specified in its charter)

France

(Jurisdiction of Incorporation or Organization)

12 boulevard Garibaldi**92442 Issy-Les-Moulineaux Cedex,****France****Tel. 011 33 1 46 29 08 00**

(Address of Principal Executive Offices)

Securities registered or to be registered pursuant to Section 12(g) of the Act:**Title of each class****Name of each exchange on which registered**

Shares, nominal value €1.00 each*
American Depositary Shares, evidenced by
American Depositary Receipts, each representing one Share.

Nasdaq National Market

*The Shares are not traded on the Nasdaq National Market but are registered only in connection with the registration of American Depositary Shares pursuant to the requirements of the Securities and Exchange Commission.

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:

None

The number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

Shares	14,810,614
American Depositary Shares	1,039,183

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes No

Indicate by check mark which financial statement item the Registrant has elected to follow.

Item 17 Item 18 **TABLE OF CONTENTS****PART I**

Item 1:	Identity of Directors, Senior Management and Advisors
Item 2:	Offer Statistics and Expected Timetable
Item 3:	Key Information
Item 4:	Information on the Company
Item 5:	Operating and Financial Review and Prospects
Item 6:	Directors, Senior Management and Employees
Item 7:	Major Shareholders and Related Party Transactions
Item 8:	Financial Information
Item 9:	The Offer and Listing
Item 10:	Additional Information
Item 11:	Market Risk
Item 12:	Description of Securities Other Than Equity Securities

PART II

Item 13:	Defaults, Dividend Arrearages and Delinquencies
Item 14:	Use of Proceeds
Item 18:	Financial Statements
Item 19:	Exhibits

PRESENTATION OF INFORMATION

Unless the context otherwise indicates, references to "Wavecom," "we" or us include Wavecom S.A. and its subsidiaries. References to "U.S. dollars" or "\$" contained herein are to the lawful currency of the United States, and references to "euro" or "€" are to are to the currency of the European Monetary Union.

FORWARD LOOKING STATEMENTS

This annual report contains forward looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward looking statements are not guarantees of Wavecom's future operational or financial performance and are subject to risks and uncertainties. Actual operational and financial results may differ materially from Wavecom's expectations contained in the forward looking statements as a result of various factors. Factors that may cause such differences include, but are not limited to, factors discussed in "Item 3—Key Information—Risk Factors" and "Item 5—Operating and Financial Review and Prospects."

PART I**Item 1. Identity of Directors, Senior Management and Advisors**

Not applicable.

Item 2. Offer Statistics and Expected Timetable

Not applicable.

Item 3. Key Information

Selected Financial Data

The following selected financial data for the five years ended December 31, 2001 are derived from consolidated financial statements of Wavecom, which have been prepared in accordance with U.S. GAAP and have been audited by Ernst & Young Audit, independent auditors. The data should be read in conjunction with "Operating and Financial Review and Prospects," the consolidated financial statements, related notes and other financial information included in this annual report. We derived the amounts shown below from our consolidated financial statements, which for the years ended December 31, 1997 and 1998 we have translated into euro using the exchange rate fixed for French francs and euro on January 1, 1999. Note 1 to these consolidated financial statements explains how the amounts were translated.

	Years ended December 31,					
	1997	1998	1999	2000	2001	2001
	(in thousands, except share and per share amounts)					
Consolidated statements of operations data:						
Revenues:						
Product sales	€ 10,478	€ 12,796	€ 34,563	€ 63,055	€ 317,571	\$ 282,670
Technology development and other services	7,198	5,780	1,853	2,518	5,093	4,533
License fees and royalties	979	998	144	—	—	—
Total revenues	18,655	19,574	36,560	65,573	322,664	287,203
Cost of revenues:						
Cost of goods sold	9,023	10,562	26,236	51,457	254,658	226,671
Cost of services	3,808	3,741	2,148	4,522	4,718	4,199
Total cost of revenues	12,831	14,303	28,384	55,979	259,376	230,870
Gross profit	5,824	5,271	8,176	9,594	63,288	56,333
Operating expenses:						
Research and development	3,222	7,851	11,913	16,133	32,634	29,048
Sales and marketing	1,291	2,088	3,412	5,836	12,416	11,051
General and administrative	852	1,962	3,070	5,598	13,297	11,836
Amortization of goodwill	—	—	—	47	278	247
Deferred compensation amortization	—	126	1,608	1,758	1,711	1,523
Provision for loss—ICO Development contract	—	—	2,607	—	—	—
Total operating expenses	5,365	12,027	22,610	29,372	60,336	53,705
Operating income (loss)	459	(6,756)	(14,434)	(19,778)	2,952	2,628
Interest and other financial income (expense), net	(40)	(364)	(207)	3,734	3,969	3,532
Provision for loss on long-term investment	—	—	—	—	(716)	(637)
Beneficial conversion feature of convertible debt	—	—	(1,072)	—	—	—
Income (loss) before minority interests and income taxes	419	(7,120)	(15,713)	(16,044)	6,205	5,523
Minority interest	—	—	—	6	804	(716)
Income (loss) before income taxes	419	(7,120)	(15,713)	(16,038)	7,009	6,239
Income tax expense (benefit)	136	(813)	(736)	(1,534)	(2,299)	(2,046)
Net income (loss)	€ 283	€ (6,307)	€ (14,977)	€ (14,504)	€ 9,308	\$ 8,285
Basic net income (loss) per share(1)	€ 0.03	€ (0.63)	€ (1.26)	€ (1.03)	€ 0.63	\$ 0.56
Diluted net income (loss) per share(1)	€ 0.03	€ (0.63)	€ (1.26)	€ (1.03)	€ 0.61	\$ 0.54
Cash dividends declared per share(2)	€ 0.0046	€ 0.015	—	—	—	—
	\$ 0.0051(3)	\$ 0.016(4)	—	—	—	—
Number of shares used in computing basic net income (loss) per share	10,000,000	10,000,000	11,922,770	14,081,178	14,726,647	14,726,647

Number of shares used in computing diluted net income (loss) per share

10,000,000 10,000,000 11,922,770 14,081,178 15,359,226 15,359,226

December 31,

	December 31,					
	1997	1998	1999	2000	2001	2001
Consolidated balance sheet data:						
Total current assets	€ 9,981	€ 11,322	€ 34,957	€ 138,323	€ 227,028	\$ 202,078
Total assets	12,604	15,843	41,462	158,298	259,947	231,379
Total current liabilities	9,538	18,274	15,927	48,957	137,064	122,001
Total long-term liabilities	583	1,414	879	166	638	568
Total shareholders' equity (deficit)	2,483	(3,845)	24,656	108,010	121,884	108,489

- (1) Net income (loss) per share amounts are computed using the weighted average number of shares outstanding. It excludes options and warrants, and reflects only the actual ordinary shares outstanding.
- (2) We do not expect to pay any cash dividends on our shares in the foreseeable future.
- (3) Translation into U.S. dollars is at the rate of \$0.90 = €1.00, based on the noon buying rate for French francs of \$0.17 = FF1.00 on June 30, 1997, the date on which the dividend was declared.
- (4) Translation into U.S. dollars is at the rate of \$0.92 = €1.00, based on the noon buying rate for French francs of \$0.16 = FF1.00 on June 30, 1998, the date on which the dividend was declared.

Exchange Rate Data

For your convenience, this annual report contains translations of euro amounts into U.S. dollars at the rate of \$0.8901 = €1.00, the noon buying rate in New York City for cable transfers in foreign currencies as certified for customs purposes by the Federal Reserve Bank of New York on December 31, 2001. The noon buying rate on June 21, 2002 was \$0.9705 = €1.00. Since January 1, 1999 our functional currency has been euro. Fluctuations in the exchange rate between the euro and the dollar will affect the dollar amounts received by owners of ADSs on conversion of dividends, if any, paid in euro on the shares and may affect the dollar price of the ADSs on the Nasdaq National Market.

The following table shows the noon buying rates for the number of U.S. dollars per euro for the period since January 1, 1999. The average is computed using the noon buying rate on the last business day of each month during the period indicated.

Month	High	Low
2002		
June (through June 21)	0.9705	0.9390
May	0.9373	0.9022
April	0.9028	0.8750
March	0.8836	0.8652
February	0.8778	0.8613
January	0.9031	0.8594
2001		
December	0.9044	0.8773
Year ended December 31,		
	Average	
2001	\$ 0.8952	
2000	0.9234	
1999	1.0667	

Since the euro did not exist prior to January 1, 1999, we cannot present exchange rates between the euro and the U.S. dollar for the periods prior to that date shown in our consolidated financial statements and in the other financial information discussed in this prospectus. Our functional currency during those periods was the French franc. In order that you may ascertain how the trends in our financial results might have appeared had they been expressed in U.S. dollars, the table below shows the average noon buying rates for the French franc per \$1.00 for 1998 and 1997, computed using the noon buying rate on the last business day of each month during the period indicated.

Year ended December 31,	Average
1998	FF 5.90
1997	5.85

Risk Factors

In addition to the other information contained in this annual report, the following risk factors should be carefully considered in evaluating us and our business.

Possible effects of a continued downturn in the global handset market

To date our growth has not been directly tied to trends in the global handset market, but rather to growth of the particular markets served by our customers (primarily in China) and the success of our customers in their markets. Although we do not expect the global market for handsets to experience growth in 2002, and expect that the market may even decline slightly, we believe that our customers are likely to increase their existing shares of local markets in Asia and we expect to add new customers. If the markets in which our customers sell their products should experience a downturn, or if our customers are unable to profit from growth in their local markets or are unable to increase their market share, or if we are unable to win new customers, our revenues may not continue to grow and may even decline.

Lack of growth in the markets for new wireless applications could hurt our business

Our prospects depend upon continued development and growth of markets for wireless communications products. Although we anticipate that the market for mobile telephones will continue to grow in the future, we believe that a significant potential for growth in the demand for our products will be in new wireless applications. These include:

- hand-held portable devices, such as personal digital assistants and computer notebooks;
- automatic vehicle location systems, which provide vehicle tracking and navigation capabilities; and
- devices which require the measurement and transmission of data, such as vending machines, utility meter and security systems.

The markets for these types of products are still in their formative stages. We may not be successful if these and other potential markets for our products do not develop.

The loss of key customers could decrease our revenues

Our performance depends on relatively large orders from a small number of customers. The following table sets forth revenues from our largest customers for the past three years:

	1999	2000	2001
Percentage of total revenues represented by the five largest customers	49.4%*	45.8%**	80.4%***
Percentage of total revenues represented by the ten largest customers	66.2%	68.4%	88.1%

* In 1999, sales to Mitsubishi represented 33.3% of total revenue.

** In 2000, sales to Sewon Telecom represented 14.7% of total revenue.

*** In 2001, sales to Sewon Telecom represented 35.4% of total revenue; sales to Amtal International Ltd., agent for TCL Mobile Communication (HK) Company Ltd., represented 32.9% of total revenue.

Our customers may reduce volumes ordered on relatively short notice, although we had no significant reductions in 2001. We believe that a small number of manufacturers will dominate the market for mobile telephones and other wireless applications. As a result, we expect to continue to depend on large orders from a small number of customers. If our existing customers reduce their orders for our products or if we lose existing customers or fail to attract new customers, our business will suffer.

We must keep pace with technological change and develop new products to remain competitive

The wireless communication markets in which we sell our products are changing very quickly. New types of products and new versions of existing products come to market regularly. Manufacturers who purchase our WISMO modules and wireless modems for

use in their mobile telephones and other applications compete with other manufacturers and, to be competitive, must offer products that satisfy consumer demand for smaller, less expensive products with more features. To meet our customers' needs, we must continuously update and enhance our products so that they meet the latest standards and include up-to-date features. To develop these enhancements, new designs and technologies we must spend significant amounts on research and development. We may lose market share if our competitors, most of which are larger and have greater resources than we do, are more successful or faster than we are in updating and improving products and technology.

We incurred losses in 1999, 2000 and the first quarter of 2001, and may incur losses again in the future

We incurred net losses in each quarter of 1999 and 2000, and in the first quarter of 2001. For the year ended December 31, 1999 we had an operating loss of €14.4 million and negative cash flow from operating activities of €11.7 million. For the year ended December 31, 2000, we had an operating loss of €19.8 million and negative cash flows from operations of €8.6 million. For the year ended December 31, 2001 we had operating income of €3.0 million and positive cash flow from operations of €50.0 million. We believe that we may experience negative cash flow during one or more quarters in 2002 as a result of our current plans for increased spending on research and development projects, particularly related to new products scheduled to be introduced in 2002, and the ongoing ramp-up of production, including the addition of lines of production at Solectron and/or a new subcontractor, tentatively scheduled for mid-year 2002. Based on our current plans, we believe that our currently available capital resources will be adequate to satisfy our cash requirements at least through 2003. If our research and development or manufacturing plans change, or if we do not achieve profits or if our profits are significantly lower than anticipated, we may need additional funding to remain in business.

Declining sales prices of mobile telephones and other wireless products could hurt our revenues

The prices of mobile telephones have tended to decrease steadily over time. We believe that the prices of other wireless communications products will also decrease over time. As a result, prices for our WISMO modules and wireless modem products have declined and are likely to continue to decline. More importantly, in order for us to address a larger market, and in order for our customers to introduce attractively priced products, we believe we must continue to reduce our selling prices. We will be unable to maintain profitability unless we can offset these price decreases with increases in unit volume or reductions in per unit costs.

We depend on a limited number of suppliers and subcontractors who could be difficult or expensive to replace

We rely on third parties to manufacture components of our products and to assemble all of our products and to test some of our products. Philips, Toshiba, Intel, Sony and RF Micro Devices currently manufacture key components of our products. We also currently use two subcontractors, Solectron and Thales Microelectronic, to assemble and test our products. Using third parties to manufacture components of our products and to assemble and test our products reduces our control over product delivery schedules, quality assurance, manufacturing yields and costs. The third parties who manufacture, assemble and test our products also have other customers and may not have sufficient capacity to meet all of our manufacturing, assembly and testing needs during periods of excess demand.

We expect that each of our individual products or product families may be assembled by a sole-source subcontractor until at least mid-year 2002. We could suffer a significant delay in meeting our customers' orders for products if one of our suppliers or subcontractors cannot meet our requirements. Although we are currently planning to add production capacity at new subcontractors, it could take a long time to establish a strategic relationship with the new manufacturer. Any of these problems could significantly harm our business.

A financial crisis or political upheaval in Asia, particularly in China, could hurt our revenues

In 1999, sales to Asian customers represented 5.9% of revenues. Sales to Mitsubishi's U.K. subsidiary, whose products were intended for end users in Asian markets, represented an additional 33.3% of our revenues in 1999. In 2000 and 2001, sales to Asian customers represented 33.9% and 83.6%, respectively, of revenues reflecting shipments pursuant to large contracts with customers in China, Taiwan and Korea. We expect that, for the foreseeable future, a significant portion of our revenues will be generated from Asian customers, and in particular from customers based in China or serving the Chinese market. A new financial crisis in Asia, particularly in China, could substantially reduce our revenues from Asian customers or customers selling to end users in Asia. In addition, political upheaval in China or a change in the political climate making China a less favorable environment for foreign businesses, could substantially reduce our revenues.

Because some of our key components come from a single source, or require long lead times, we could experience unexpected interruptions which could cause our operating results to suffer

We believe that a number of our suppliers are sole sources for key components. These key components are complex and

difficult to manufacture and require long lead times. In September 2000, the unavailability of a sole-source combined flash memory and RAM component resulted in a two-week interruption of production. We work with our suppliers on a twelve-month rolling forecast basis and we currently believe that we have secured adequate supply based on our production forecasts for the next twelve months. In the event of a reduction or interruption of supply, or a degradation in quality, a number of months could be required before we could begin receiving adequate supplies from other suppliers. Supply interruptions could delay product shipments, causing our revenues and operating results to decline.

If we do not effectively manage our growth, it could affect our ability to pursue business opportunities and expand our business

Growth in our business has placed and will continue to place a significant strain on our management systems and resources. We will need to continue to improve our operational and financial systems and managerial controls and procedures and expand, train and manage our workforce. We will have to maintain close coordination among our technical, accounting, marketing, sales and research and development departments. If we fail to effectively manage our growth and address the above concerns, it could affect our ability to pursue business opportunities and expand our business.

Our costs may increase or we may have to redesign our products if they infringe other companies' intellectual property rights

Other companies have patents, copyrights, trade secrets and other intellectual property rights covering technology used in the wireless communications industry. Currently, we have licenses to use only some of these rights. If any of our products were found to infringe on protected technology, we could be required to redesign them, to obtain licenses for this technology or to pay royalties or damages to its owner. The resulting costs would harm our business. If we were unable to obtain these licenses or to redesign infringing products, we could be prohibited from marketing them. As explained under "Business—Intellectual Property," however, owners of some of this protected technology must provide us with a license on fair, reasonable and non-discriminatory terms.

Our business could be hurt by the unauthorized use of our technology

We rely on a combination of patents, copyrights, trade secrets, trademarks and proprietary information to maintain and enhance our competitive position. We might, however, have difficulty taking effective legal action against a competitor who copied important parts of the technology we use in our products and processes. If we were unable to prevent a competitor from using our designs and techniques to produce competing products, our business would be adversely affected.

We may not be able to sell our products under the Wavecom name in North America or Japan

We have not registered the Wavecom name in North America or Japan. Several other companies, some of which are in businesses similar to our own, use the word Wavecom or a similar word as either a trade name or as a brand name for their products. This could cause confusion in the marketplace and harm our sales. If one of these other companies were to take effective legal action to prohibit us from continuing to use the name Wavecom in North America or Japan, we could be forced to use a different name and, as a result, it would be more difficult for customers to identify us and our sales might suffer.

We need to attract and retain key personnel who are skilled in our business and technology to remain competitive

Our success depends on the skills of some of our key employees, including two of Wavecom's founders, Michel Alard, who is currently Chairman of the Board and Chief Executive Officer (*Président Directeur Général*), and Aram Hékimian, who is currently the Deputy Chief Executive Officer (*Directeur Général Délégué*). If either of these individuals were to leave Wavecom, the loss of their key management and technical skills could harm the development and implementation of our long-term strategy, customer relationships, operations and growth.

It is important to our success that we retain our highly skilled product development, sales and marketing employees and continue to attract, train and retain additional skilled employees. We rely to a large extent on independent contractors who work for consulting firms. In the future, it may become more difficult to recruit and retain the employees and independent contractors that we would need to continue to grow. Any failure to attract, hire or retain personnel could delay our research and development projects or reduce the sales of our products.

Our quarterly revenues fluctuate significantly and may affect the price of our shares and ADSs

Our revenues and operating results fluctuate significantly from quarter to quarter. The many factors that could cause our quarterly results to fluctuate include:

any delay in our introduction of new products or product enhancements;

- the size and timing of customer orders and our product shipments;
- any delay in shipments caused by component shortages or other manufacturing problems;
- the loss of a major customer;
- a reduction in the selling price of our products;
- the impact of seasonal variations in demand linked to the timing of holiday buying seasons, such as the Chinese New Year; and
- customer responses to announcements of new products and product enhancements by our competitors.

Due to these and other factors, our results of operations could fluctuate substantially in the future and quarterly comparisons may not be reliable indicators of future performance. In addition, because many of our expenses for personnel, facilities and equipment are relatively fixed in nature, if revenues fail to meet our expectations we may not be able to reduce expenses accordingly. As a result, we could experience less than expected net income or we could experience net losses. These quarterly fluctuations may have a negative effect on the price of our shares and ADSs. It is possible that in some future quarter our results of operations will be below the expectations of public market analysts and investors, in which case the price of our shares and ADSs could fall.

Our U.S. shareholders could suffer adverse tax consequences if we are characterized as a passive foreign investment company

If, for any taxable year, our passive income or our assets that produce passive income exceed levels provided by law, we may be characterized as a passive foreign investment company, or PFIC, for U.S. federal income tax purposes. This characterization could result in adverse U.S. tax consequences to our shareholders who are subject to U.S. taxation. U.S. persons should consult with their own U.S. tax advisors with respect to the U.S. tax consequences of investing in our shares or our ADSs. See "Item 10—Additional Information—Taxation—United States Taxation—Passive Foreign Investment Company".

Events anticipated in forward-looking statements in this annual report may not occur

This annual report contains forward-looking statements that involve risks and uncertainties. These forward-looking statements are usually accompanied by words such as "believe," "anticipate," "plan," "expect" and similar expressions. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of a number of factors, including the risks faced by us described above and elsewhere in this annual report.

Item 4. Information on the Company

Business Overview

Wavecom develops, markets and sells a line of digital wireless standard modules, known as WISMO modules, for use in mobile telephones and other wireless applications based on the Global System for Mobile Communications ("GSM") and GPRS standards. We are in the process of developing WISMO modules based on UMTS (commonly known as "third generation" or "3G" technology). Following our acquisition of Iconn Wireless, a San Diego-based Code Division Multiple Access ("CDMA") technology company, in December 2001, we have also begun the development of a CDMA module. When we are able to offer WISMO modules in GSM, GPRS, CDMA and UMTS versions, we believe we should be able to address nearly all the world's principal wireless markets.

WISMO modules are compact devices that include substantially all of the hardware, software and other technology needed to enable wireless communications. WISMO modules offer a quick and simple way to integrate digital wireless communications in mobile telephones, wireless modems and a wide range of other applications requiring wireless communications in our target markets: automotive, telemetry, multimedia and telephony. Examples of these applications include automotive navigation and information systems, personal digital assistants with wireless communication functions and devices enabling communication between vending machines or utility meters and central control centers. In order to help our customers, we provide them with the services and expertise required to integrate WISMO modules into their mobile telephones and other wireless applications. We also sell wireless stand-alone and integrated modems that incorporate WISMO modules.

Our products incorporate digital wireless technology that we have developed since 1993, when Wavecom was founded. Our product development calls for highly specialized technical know-how and experience in digital and radio frequency circuit design and microchip architecture, the design of real-time software and, most importantly, the optimal integration of these technologies. Between 1993 and 1996, we focused mainly on providing engineering services for our clients' customized digital wireless products. Building on engineering expertise developed during this period, we commercially introduced the first version of the WISMO module in January 1997. We were the first company to commercialize GSM technology in the form of a standard module and believe that our current WISMO Quik and WISMO Pac modules, are among the smallest wireless standard modules available.

In March 2000 we began mass production of two dual-band versions of our WISMO Quik 2300 module (formerly known as the WISMO2C module). In the fourth quarter of 2001, we commenced mass production of our WISMO Pac 3100 (formerly known as WISMO3) module in two dual-band versions. The WISMO Pac module is more compact than the WISMO Quik module and uses new packaging technology, known as Chip-Pac® technology, which allows our customers to solder the WISMO Pac module onto the printed circuit board of the mobile telephone or other wireless application in a much more efficient manner than the manual connection process necessary for the WISMO Quik module. Both the WISMO Quik and WISMO Pac modules are now designed to operate on both GSM and GPRS networks.

We expect to commence production of a number of new WISMO modules during 2002. In the second quarter, we plan to launch the thinner, lighter-weight WISMO Quik 2400 module. In the fourth quarter, we expect to introduce a quad-band version of the WISMO Quik module that will operate on all four GSM/GPRS frequencies (900MHz and 1800MHz for the European and Asian markets and 1900MHz and 850MHz for the U.S. GSM and GPRS markets). Our objective is to put a CDMA version of the WISMO Quik module into mass production by the end of 2002.

Background of the wireless communications industry

The wireless communications industry has grown rapidly over the past decade as wireless communications products and services have become widely available and increasingly affordable. Technological advances, changes in telecommunications regulations and the allocation and licensing of additional radio spectra have helped fuel this growth worldwide and have led to the development of competing wireless communications services. At the same time, consumer demand for increased mobility has led to the use of wireless technology both in products that were previously available only in "wired" versions and in completely new applications.

Consumers and businesses are demanding to have access to information and to be able to react based on that information anywhere, anytime. Availability of information will be provided by the Internet; the ability to access and act on that information immediately will be supplied by wireless communications technology.

Transmission standards

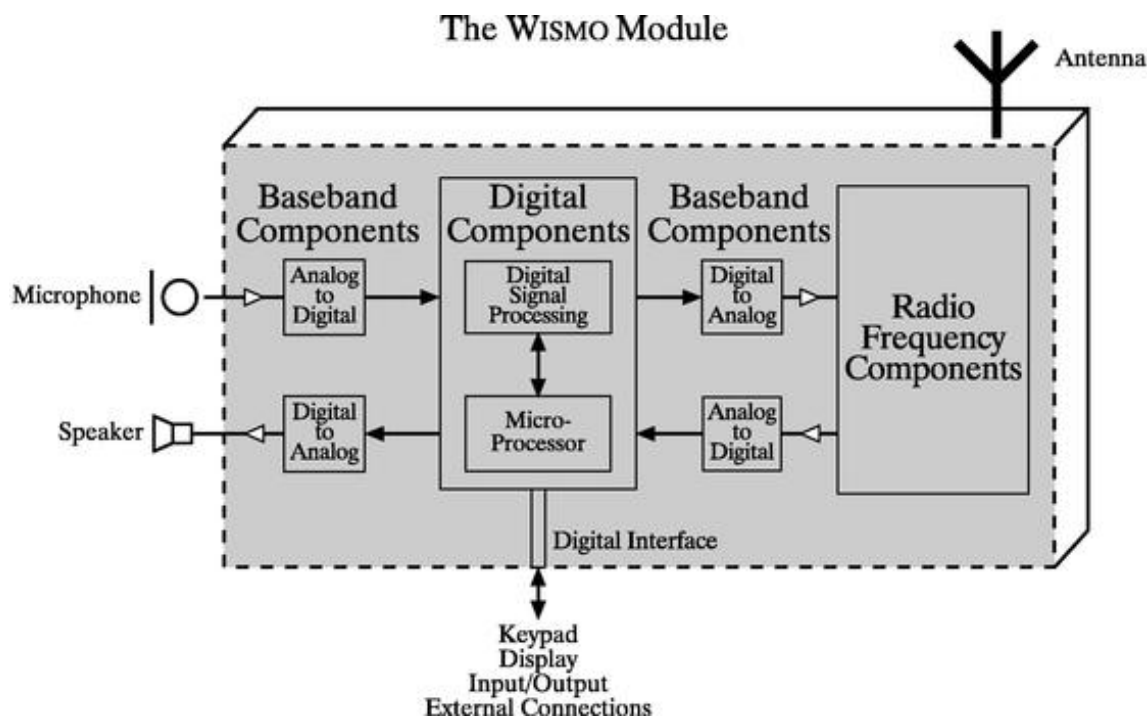
The wireless communications market is characterized by a proliferation of transmission standards in different parts of the world, including first generation analog standards, second generation digital standards, such as GSM, and so-called "2.5 generation" standards, such as GPRS and CDMA 1xRTT. Digital wireless systems generally operate on the 850MHz, 900MHz, 1800MHz or 1900MHz frequency bands. GSM is currently the dominant standard in Europe for both voice and data transmission.

The wireless communications industry is currently developing specifications for third generation ("3G") standards to accommodate increased capacity and to allow for faster data transmission. Universal Mobile Telecommunication Systems ("UMTS"), the primary proposed 3G transmission standard, was introduced commercially in a limited geographic area in Japan in 2001 and is generally expected to be introduced commercially in Europe and the rest of Asia by 2003 or 2004. The increased capabilities of UMTS are expected to attract subscribers from other wireless standards in use around the world. To enable the introduction of broadband wireless services, which enable faster data transmissions, prior to the widespread availability of UMTS, the wireless industry is developing interim "2.5 generation" solutions based on existing second generation technology. These solutions include general packet radio services ("GPRS"), which is a transmission standard being developed to support packet-oriented data applications on GSM, and code division multiple access ("CDMA") 1xRTT. GPRS and CDMA 1xRTT, which will enable a more efficient use of a wireless communications network and provide faster transmission speeds, are expected to be implemented fully in the second half of 2002 or early 2003, for GPRS (CDMA 1xRTT has just recently been implemented).

Gartner, a market research firm, projects that the worldwide wireless communications market will increase from approximately 938 million subscribers in 2001 to approximately 1.5 billion subscribers in 2005, with handset sales increasing from 400 million units in 2001 to approximately 545 million units in 2005. Gartner also projects that GSM/GPRS handset sales will increase from approximately 233 million in 2001 to approximately 320 million in 2005, which would represent 58% of the total estimated worldwide market for wireless handset sales. CDMA and CDMA 1xRTT subscriptions represented nearly 16% of new subscribers in 2001 and are expected to represent more than 21% of new subscribers in 2005, according to Gartner. The W-CDMA variant of

UMTS, which Wavecom intends to introduce in future products, is expected by Gartner to represent more than 9% of new subscribers in 2005.

Wireless terminals



A typical wireless terminal, such as a mobile telephone, contains baseband, digital and radio frequency hardware components and related software. Baseband components process analog signals and convert signals from analog to digital or from digital to analog. Digital components control the wireless device's circuitry and send data to and receive data from the network through the terminal's radio frequency components. They also process all of the information within the device and manage information going to and from the user. Radio frequency components amplify, transmit and receive the high frequency analog signals that carry the information being communicated. Typically, up to two-thirds of the development effort for a wireless communications application consists of writing software that integrates and manages the hardware components. The wireless applications designed for each band and transmission standard generally require different hardware and software.

Currently, prior to being placed in service, each new wireless communications device must satisfy a series of technical tests meeting the requirements of the relevant regulatory authority (for example, the Federal Communications Commission in the United States). The process, commonly known as "full type approval," can take up to six months, depending on the experience of the applicant and the familiarity of the regulator with the particular product. In European Community countries, a recent directive is being implemented which provides that sales of wireless communication products into the European Community will no longer require full-type approval provided that the manufacturer makes a declaration of conformity with the requirements of the directive.

In addition to testing to confirm compliance with regulatory requirements, prior to commercialization, each new wireless application must be field tested in its target markets to ensure that it operates properly with each wireless network for which it is intended to be used. These networks all vary due to different infrastructure design and the ongoing evolution of GSM network software, which is managed independently by each network operator.

Our market

The market for wireless communications terminals has generally been characterized by rapid growth, evolving industry transmission standards and the frequent introduction of new applications. Manufacturers of mobile telephones must continually re-design their products to meet consumer demands for an increased number of functions, a wider variety of styles, smaller and lighter equipment, longer battery life and greater reliability, all at reduced costs. With the slowing of demand in 2001, mobile telephone manufacturers are under increased pressure to achieve profitability. Manufacturers of many other wireless communications products must offer compact, cost-effective products that provide a wide range of functionality and can be quickly brought to market. As segments of the wireless communications market evolve, the industry must offer a wider range of products to better meet the specific needs of individual consumers.

These market demands have made it increasingly difficult for manufacturers to develop and supply all the technology they need for new wireless applications, to meet regulatory requirements and to complete field testing, all in a timely and cost-effective manner. Developing and producing the software, chip sets and other integrated components in a compact wireless communications product requires significant expertise. Some manufacturers of products for the wireless market choose not to develop this technology in-house, preferring to rely on a third party supplier so that they may focus on their core competencies. In addition, other consumer products companies do not have the financial means or technical resources to develop their own wireless technology. As a result, many manufacturers rely increasingly on subcontractors to develop and supply critical digital wireless components.

Strategy

We believe that as the wireless communications industry matures, it will evolve from a model where providers of wireless applications manufacture all of the technology in the end product to a model where each provider of the end product focuses on branding, marketing, distribution and product design, favoring a trend toward outsourcing the wireless communication technology function.

Wavecom's products are designed to enable product manufacturers to incorporate advanced digital wireless technology quickly and efficiently into their applications. We strive to maintain technological leadership and to be a leading independent vendor of wireless standard modules, wireless modems and related support services for our products' integration in consumer and business digital wireless applications. Key elements of our strategy include:

Expanding the use of WISMO products in mobile telephones and new wireless applications

- *Mobile Telephones:* We believe that there is a significant opportunity for us to supply WISMO modules both to new entrants in the mobile telephone market, as well as to established manufacturers who are increasingly looking to outsource wireless technology.
- *New wireless applications.* Wireless communications allow many types of equipment that are currently tied to wired telephone networks to be freed of locational constraints and the need for costly infrastructure investment. Wireless communications can also be used to enhance such products as portable computers by enabling them to send and receive data without being attached to a landline. Our strategy is to expand the use of our products in a broad range of wireless applications.
- *Adapting our technology for use with evolving digital transmission standards.* The current versions of the WISMO module are based on GSM and GPRS technology. We intend to produce WISMO modules that support new wireless communications standards as they are introduced. We are developing products for the CDMA 1xRTT standard and we are also focusing our research and development efforts on products for the UMTS standard.
- *Working closely with customers in the early stage of product development.* Our success to date has been based on our technical expertise and collaboration with a number of strategic customers. We will continue to work with customers early in their product design stage in order to help them develop applications in a way that will easily support the integration of the WISMO module. We believe that early collaboration allows customers to lower their development costs and reduce the time required to introduce new products and enter new markets. It also enables Wavecom to better anticipate and meet its customers' future wireless technology requirements.
- *Pursuing strategic acquisitions.* We intend to pursue acquisitions of businesses, products, services and technologies that are complementary to our existing business in order to expand our position in the wireless communications market. Although we have no present commitments or agreements regarding any acquisitions, we believe that there are acquisition candidates that could enhance our position in this market. A likely goal of any such acquisitions would be to acquire technology that would allow us to achieve our research and development objectives more quickly or efficiently.
- *Expanding sales to additional geographic markets.* We are expanding our sales and marketing capabilities in order to address the worldwide market for our products. We increased our direct sales capabilities from six sales people at the end of 1998 to 16 at the end of 2001. We increased our distributor network from seven in 1998 to 25 at the end of 2001. We opened branch offices in Tokyo (April 2000), Seoul (January 2001), and Darmstadt, Germany (October 2001) and a liaison office in Taipei (February 2002). We expect to open further branch offices or subsidiaries in Europe and in the Asia-Pacific region during 2002. We intend to add direct sales staff in all three regions and to continue to expand indirect channels by adding more distributors.

Products

WISMO modules

WISMO modules are compact devices that incorporate substantially all baseband, digital and radio frequency hardware and software needed for a digital wireless terminal. WISMO modules are offered either with standard software interfaces or with customized software (which may be developed by the customer or by Wavecom to the customer's specifications). Prior to 2001, when our production volumes were under one million units per year, product segmentation was not a cost-effective strategy and we followed a "one-size-fits-all" approach. In 2001 we announced the creation of differentiated lines of WISMO modules, beginning with the introduction of the WISMO Pac modules in November 2001. We currently offer two different lines of WISMO modules: the WISMO Quik line (previously known as the WISMO2 line of modules) and the WISMO Pac line (which includes the products previously referred to as the WISMO3 module and the WISMO5 module). The difference between the two product lines is essentially in their packaging. The WISMO Quik line has a connector, and is more suitable for integration in automotive and telemetry applications. The WISMO Pac line has the form of a single component and includes our patented Column Grid Array™ (CGA) design. Used to provide shielding as well as connectivity, the CGA enables WISMO Pac to be automatically positioned and soldered onto a circuit board like any traditional integrated circuit, representing efficiencies in terms of industrial design and assembly.

The WISMO Quik line of modules currently consists of the WISMO Quik 2300 series, which has been in production since March 2000. The Q2300 series is available in GSM/GPRS in two dual-band versions that operate either on the 900MHz/1800MHz bands or the 900MHz/1900MHz bands, and measures 58x32x6 mm and weighs 18g. The WISMO Pac line currently comprises the WISMO Pac 3100 series. The P3100 series, like the Q2300 series, is available in GSM/GPRS in two dual-band versions that operate either on the 900MHz/1800MHz bands or the 900MHz/1900MHz bands. However, the P3100 series is more compact than the Q2300 series with an area of less than 15cm², a thickness of 5.1mm and weight of 11g. We commenced mass production of the WISMO Pac 3100 series in December 2001.

The first generation WISMO1 module was introduced in 1997, but by mid 2000 all WISMO1 module customers had migrated to our WISMO Quik 2300 module (formerly known as the WISMO2C module); production of WISMO1 modules ceased during the third quarter of 2000. We began commercial shipments of the WISMO2A module, which operates on the 900MHz band only, in January 1999. That product was superseded by the WISMO2C product in the second quarter of 2000.

Sales of WISMO modules represented 26.2% of our revenues in 1999, 59.4% in 2000 and 88.6% in 2001. Sales of assembled mobile telephones that incorporated WISMO modules represented an additional 33.3% of our revenues in 1999.

Basic features of the WISMO module include all standard voice functions now available on the market, including conferencing, call hold, call waiting and call forwarding. Main data features of the WISMO module include the ability to send and receive short text messages and facsimiles from a mobile telephone. The WISMO module can send or receive data in multiple modes at rates up to 9,600 or 14,400 bits per second, depending on the GSM network, and theoretically up to 42,800 bits per second (for GPRS class 2) or up to 85,600 bits per second (GPRS class 10), depending on the GPRS network. At this time, the GPRS rates remain theoretical goals in laboratory conditions and realizable rates are much lower. A WISMO module has interfaces for an antenna, a subscriber identity module, an LCD screen, a keypad, microphone input and earphone output.

The principal advantages of the WISMO solution for our customers are that:

- The customer can acquire digital wireless technology without significant internal research and development investment. This reduces product development and field-test time, resulting in a reduced time to market.
- The small size of the WISMO module provides our customers with significant flexibility in designing their wireless applications.
- WISMO modules are pre-tested by authorized type approval certification laboratories, which results in a streamlined regulatory approval, and which allows our customers to more easily confirm compliance with regulatory requirements.
- We assist our customers in performing field tests in their target markets to ensure that their applications operate properly with each wireless network for which they are intended to be used.
- By integrating all of the key electronic components, including the sensitive radio frequency components, into our product, we can help our customers achieve higher yields in their production process since we have already

addressed most technical quality issues during our own production.

- A customer who has integrated a WISMO module into a product based on one band can rapidly integrate a WISMO module based on another band into the same product, providing rapid access to new markets.
- Unlike some other suppliers of digital wireless technology, we are an independent supplier and do not compete with our customers who manufacture products for the end user market.

New WISMO products under development

WISMO Quik modules. We are currently developing the following new products for the WISMO Quik line:

- The WISMO Quik 2400 series will concentrate all components on one side of the module, resulting in a thinner (3.9mm) and lighter (11g) product, compared to the Q2300 series, while keeping the same length and width. We expect to commence mass production of the Q2403 in the second quarter of 2002 with a GSM/GPRS dual-band version (900MHz/1800MHz). We expect to begin mass production of a quad-band version (Q2486), covering 850MHz, 900MHz, 1800MHz and 1900MHz, by the end of 2002.
- A dual-band CDMA version (800MHz/1900MHz) of our WISMO Quik module is under development and will be identical in size and mechanical footprint to the Q2300 GSM/GPRS version. Our objective is to commence mass production in the fourth quarter of 2002.

WISMO Pac modules. We are currently developing the next generation of WISMO Pac modules which will be GSM/GPRS quad-band (850MHz/900MHz/1800MHz/1900MHz) and in a smaller form factor than the P3100 series. We are currently designing our own baseband chipset in order to attain size and cost reductions, as well as increasing features and functions. Working samples of the baseband chipset are expected to be available in mid-2002. We expect to commence mass production of the new series in the first half of 2003.

Wireless modems

In addition to the WISMO module product line, we offer a GSM-based external stand-alone wireless modem, the FASTRACK, designed for data, fax, short message service and voice applications. In response to customer demand for smaller modems which can be more easily integrated into a product, we introduced an integrated wireless modem, the INTEGRA, in the second quarter of 2000 that is intended to be soldered onto a printed circuit board. Our wireless modems have full type approval and therefore can be used off-the-shelf. This enables a customer to incorporate immediately wireless connectivity in its own application without any delays related to type approval. Typical uses for wireless modems include vehicle fleet management and remote measuring and reporting of information in such applications as utility meters, vending machines or security systems. Whereas WISMO modules are typically purchased by product manufacturers for integration into mobile telephones, personal digital assistants and other high volume products, wireless modems are more commonly purchased by customers seeking an off-the-shelf wireless solution for relatively small volume applications where size is not a critical factor. In 2001, our average sale price for wireless modems was €136 compared to €154 in 2000, although prices may vary significantly depending on volume. Sales of wireless modems represented 31.8% in 1999, 36.8% in 2000 and 9.9% in 2001.

Customer service and technical support

We believe that providing customers with comprehensive product service and support is critical to maintaining a competitive position in the wireless communications market. Our support services enable the customer to pass rapidly through the development phase and to begin production. Services include:

- product design assistance and support;
- development of application specific software;
- validation and field testing;
- assistance in obtaining full type approval where required; and
- provision of production test tools.

We also assist our customers by providing them with software development tools. Our MUSE Platform™, or Modular User Software Environment™ is an open software environment that allows our customers' software engineers to easily develop and embed wireless applications directly onto WISMO modules and modems. Our first product available based on the MUSE Platform, Open AT, was launched in the fourth quarter of 2001 and is designed for vertical applications such as telemetric, automotive and multimedia systems. Relying on AT commands to drive the WISMO, Open AT lets developers take advantage of available processing capacity and intelligence of WISMO modules and modems. Open AT allows our customers to have more autonomy and flexibility when developing their wireless applications. Open MMI, a product designed for use in developing handsets, is expected to be available in the third quarter of 2002.

We believe that close contact with our customers improves their level of satisfaction and provides us with insights into their future product development plans. To expand our customer base, we offer WISMO modules as part of starter kits, enabling potential customers to perform initial feasibility studies. As of December 31, 2001, we had 14 technical support personnel in France, Hong Kong and San Diego (compared with eight in 2000).

Applications

We are an established third-party supplier of digital wireless modules for the mobile telephone market and new and emerging wireless applications markets. We are targeting four wireless applications markets that we believe will generate the most significant demand for our products over the next three to five years. We have included our direct product sales by wireless application as a percentage of total product sales for 2001 and 2000. Indirect sales to our distributors consist primarily of sales of modems, which we believe are used mainly for automotive and telemetry applications. In 2001, product sales to our distributors accounted for 13.2% of our total product sales (32.3% in 2000).

Telephony

We market the WISMO module to mobile telephone manufacturers. The WISMO module allows telephone manufacturers to introduce a product to the market quickly, to minimize their internal research and development costs and to focus their efforts on product design, marketing and distribution. Our customers typically assemble their own mobile telephones using a WISMO module. For certain customers in the past we have also agreed to sell assembled mobile telephones or to customize the WISMO module to meet their needs. Companies that have integrated or are in the process of integrating our products or technology into their mobile telephones include China Kejian Corporation, Mitsubishi, NEC, Philips Consumer Communications, Samsung, Sewon Telecom Co., Ltd., Guangzhou Southern High-tech Co., Ltd. ("Soutec") and TCL Mobile Communications Co. Ltd.

In 2001 revenues from direct product sales for telephony applications were 69.6% of total product sales (23.8% in 2000).

Automotive

Automotive applications combine digital wireless technology with global positioning system technology which together provide interactive information regarding traffic, emergency assistance, routing, local businesses and places of interest. Automotive applications could also include an emergency assistance feature that would provide information, including vehicle location, in the case of accidents or theft. These applications also include the provision of a wireless telephone as a standard equipment option in an automobile. We are supplying WISMO modules to SiemensVDO and Magneti Marelli, two of Europe's largest automotive equipment suppliers. In late 2000, we announced a contract with Trimble for integration of WISMO modules into a fleet management product.

This category also includes applications for fleet management. Digital wireless technology in combination with global positioning system technology allows the location of trucks, taxis, and other vehicles to be monitored from a central location.

In 2001 direct product sales for automotive applications accounted for 2.3% of total product sales (10.1% in 2000).

Telemetry

Telemetry is the use of communications networks to obtain information from remote locations, and is sometimes known as "machine-to-machine communication". The use of WISMO modules makes telemetry possible where the installation of landlines is not practical. Applications include remote meter reading by utility companies, real-time updating of information on electronic billboards, credit card authorization for mobile payment terminals and remote messaging from vending machines to report inventory levels or maintenance requirements. Falcom GmbH, a German integrator of wireless products, has built WISMO modules into terminals for specialized applications in vending machines, hospitals, high technology companies, homes and other market sectors. Necta (formerly Zanussi) has incorporated WISMO modules into its vending machines. In addition, utilities in Australia and Finland use our modems for remote reporting of electric power consumption. In 2001 direct product sales for telemetry

applications accounted for 5.4% of our total product sales (19.5% in 2000).

Multimedia

WISMO modules can enable personal digital assistants, smartphones, notebook computers and other portable devices to be connected to a wireless communications network. We believe that the introduction of the GPRS standard, with its increased speed and efficiency, will accelerate the demand for these applications, by allowing easier access to e-mail and the Internet. We currently sell WISMO modules to Handspring Inc. for integration into its Treo line of wireless personal digital assistants, to Inventec Corp. for integration into a wireless Internet access device and to Matsushita for integration into a Panasonic reinforced portable computer for industrial use. In 2001 direct product sales for multimedia applications accounted for 9.5% of our total product sales (14.3% in 2000).

Sales, marketing and distribution

We use a direct sales force to sell our line of WISMO modules and wireless modems, and to market related services. We also use distributors to sell wireless modems. Because modems are sold as a finished product, their applications do not require Wavecom's technical expertise, which is necessary to integrate WISMO modules. We currently work with distributors covering territories including approximately 60 countries in Europe, the Asia-Pacific region and the Americas. Our sales, marketing and distribution efforts are organized into three geographical areas. Our Paris head office is responsible for Europe, the Middle East and Africa, with assistance from a branch office near Frankfurt, Germany. Our San Diego office is responsible for the Americas. Our Hong Kong office is responsible for the Asia-Pacific region and overseeing our offices in Tokyo, Seoul and Taipei. At December 31, 2001, we had 47 sales and marketing employees and independent contractors..

Manufacture and assembly

We use the fables business model in which we outsource the manufacture, assembly and most testing of our products. By using third-party manufacturers, we gain access to up-to-date facilities and processes without significant capital outlay and are able to focus our resources on research and development, product design, quality assurance, marketing and customer support. Through our third-party manufacturers, we order components for our products from microchip foundries, including Philips, Toshiba, Intel, Sony and RF Micro Devices. Non-standard components are based on our design. In order to streamline the purchasing process for our products and to benefit from the leverage of our manufacturers' higher volumes, in January 2000 we transferred responsibility for components purchasing logistics to our manufacturers. During 2000 and most of 2001, our purchasing staff negotiated the cost of components used in our products primarily with our manufacturers. We added personnel to our purchasing staff in 2001 and, by the end of the year, had become more involved in the direct negotiations with the component suppliers. We work with our manufacturers on a twelve-month rolling forecast basis with firm orders placed two months in advance. In addition, our sales contracts generally require our customers to provide us with a six- to twelve-month product purchasing forecast that we use as the basis for preparing our own forecasts and negotiations with suppliers to secure the supply of components for our products.

We use two third-party manufacturers to assemble and test our products. Solectron Corporation produces the majority of our WISMO modules and assembles our wireless integrated modems. Over the course of the fourth quarter of 2001, and ending in January 2002, production of WISMO modules at Solectron was transferred from their plant in Bordeaux, France to their factory in Timisoara, Romania. In 2001, one production line for WISMO modules was established at Thales, near Rennes, France, which previously only assembled our wireless external modems. The production facility at Thales was established in order for us to have a platform on which to produce new products which remains close to our French headquarters, as well as to provide additional production capacity. Each of these manufacturers is certified to applicable ISO 9000 and 14,000 series specifications, which means that their operations have in each case been determined by independent examiners to comply with internationally developed quality control standards. Solectron and Thales are important suppliers for us, and should either of them fail to meet our requirements, we may have difficulty meeting customer demand. We have, however, identified other manufacturers that could replace them. We are currently actively seeking to qualify a third subcontractor and expect to begin production with the new supplier in the second half of 2002.

In 1999, we entered into a contract for manufacturing and related services with Solectron-France S.A. Pursuant to this agreement, Solectron manufactures, assembles and tests our WISMO module lines. The term of the agreement is for one year and is automatically renewed for additional terms of one year each, unless written notice to the contrary is sent by one of the parties at least 90 days before the anniversary date of the agreement. The total term of the agreement may not exceed three years. We are currently in the process of renegotiating the contract with Solectron.

The manufacturing services provided by Thales through the end of 2001 were based upon an informal arrangement. A formal contract with Thales was signed in early 2002.

Our arrangements with both Solectron and Thales call for us to purchase the tested finished products. Component purchasing is the responsibility of the third-party manufacturer. The third-party manufacturer issues purchase orders to the component suppliers based on the quantities of finished goods ordered from Wavecom. In general, components need to be ordered two to four months before they enter the production process. In the event that we initiate an engineering change that results in the obsolescence of components specific to our products, the third-party manufacturer may invoice Wavecom for the cost of these unusable components.

Wavecom owns all testing equipment related to the manufacturing of its products and could transfer it to a different manufacturer if necessary. We conduct our own quality control at the premises of our third-party manufacturers. As of December 31, 2001 we had 108 employees and independent contractors in production oversight, manufacturing, purchasing and quality assurance.

Research and development

To keep pace with rapid technological changes and market pressures in our industry, we maintain a substantial program of research and product development. This program focuses primarily on developing new products that are progressively smaller and lighter, with higher performance levels and enhanced features and functions, as well as adapting our products to evolving and new transmission standards.

We intend to continue internal product development to further reduce the size of the WISMO modules, to reduce their power consumption and to enhance their functionality. Our current projects include the introduction of the next generation of the WISMO Quik module, the 2400 series. The WISMO Quik 2400 module is fully compatible with the WISMO Quik 2300 module in terms of mechanical footprint and software and hardware interfaces, but is 40% thinner (at 3.9 millimeters) and 45% lighter (at 11 grams) than the WISMO Quik 2300 module. We expect to commence mass production of the WISMO Quik 2400 module in the second quarter of 2002. We expect to commence mass production of a quad-band version of the WISMO Quik module, which will operate on the 850MHz, 900MHz, 1800MHz and 1900MHz bands, and a CDMA version of the WISMO Quik module in the second half of 2002. We believe that we will be the first company to have a quad-band solution on the market and the first company to have pin-to-pin compatible GSM/GPRS and CDMA wireless modules.

We expect to commence mass production of a thinner, lighter version of the WISMO Pac 3000 module in the second half of 2002 and we expect to have prototypes of the WISMO Pac 5000 series (formerly WISMO5) module by the end of 2002. The WISMO Pac 5000 series is expected to be roughly half the size of the WISMO Pac 3000 module. We are currently working on proprietary chipset designs that we intend to integrate in the next generation of the WISMO Pac module, which is expected to weigh in at 6 grams and to go into mass production in early 2003.

We also intend to continue to focus significant research and development efforts on the introduction in the second half of 2003 of a new line of WISMO modules which will use the 3G UMTS standard and which will be dual-mode with GSM/GPRS.

We introduced our MUSE (Modular User Software Environment) Platform in the third quarter of 2001.

Wavecom's research and development expenditures totaled approximately €11.9 million in 1999 (32.6% of revenues), €16.1 million in 2000 (24.6% of revenues) and €32.6 million in 2001 (10.1% of revenues). We intend to maintain a substantial research and development program and expect research and development expenses to increase in the future. As of December 31, 2001, our research and development staff included 244 salaried employees and 110 independent contractors, all of whom work in France except for 59 personnel located at our subsidiaries. The research and development personnel located at our subsidiaries include engineers who joined us following our acquisitions of Iconn Wireless in December 2001, who are dedicated to developing a CDMA version of our WISMO Quik module, and Arguin Communications in October 2000, who are working on our UMTS technology development. We use independent contractors to gain access to their specialized expertise and to give us greater flexibility in staffing particular projects.

Competition

Competition in our markets is intense. In the mobile telephones and personal digital assistants markets, while we believe we are the only supplier of a complete modular solution, we face competition from engineering design firms, such as TTP Communications, as well as from companies such as Infineon, Texas Instruments, Analog Devices and Lucent Technologies, Inc., who supply both components and reference designs for wireless technology. In 2001, both Motorola and Ericsson announced that they would license their technology to makers of mobile phones and personal digital assistants, but we believe the solutions of both companies are based on reference designs and are not complete modular solutions. For other wireless applications we face competition from large integrated consumer electronics companies and from several companies that design and manufacture wireless standard modules and wireless modems, including Ericsson, Nokia, Motorola, Siemens, Sierra Wireless, Novatel Wireless

and Xircom. We believe that our ability to compete successfully in the wireless communications market depends upon a number of factors within and outside our control, including price, quality, availability, product performance and features; the timing of new product introductions by us, our customers and competitors; and customer service and technical support. Some of our customers could choose to develop and manufacture their own wireless products and solutions and could elect to compete with us at any time.

Intellectual property

The European Telecommunications Standards Institute ("ETSI") has a policy that allows third parties to disclose intellectual property rights which they believe are essential to the use or operation of GSM/GPRS-based equipment. Once an owner of such a right gives notice to ETSI, it must grant irrevocable licenses to third parties on fair, reasonable and non-discriminatory terms and conditions to allow the manufacture and sale of equipment. Some owners of GSM/GPRS-related patents may not have notified them to ETSI.

In order to produce and market our GSM/GPRS-based WISMO modules and wireless modems, we must assess whether licenses from third-party patent owners are required. Because of the intense competition in our industry, there may be a substantial number of patents to consider and it is difficult to identify all those which may have an impact on our products. We believe that most of the patents important to us are the GSM/GPRS patents covered by ETSI's policy. These include patents of Motorola, Siemens, Philips, Nokia, Mitsubishi, NEC, and Alcatel. At this time, we have licenses to use GSM/GPRS-essential patents of Motorola, Siemens and Philips and are currently negotiating licenses with Mitsubishi, NEC, Alcatel, Nokia, Ericsson and Matra Communications. As we identify other potentially essential patents, we may need to enter into additional license agreements. Should we fail to identify all patents needed to produce our products or to obtain the required license agreements, we could be found to have infringed the patent rights of third parties. In addition, as new digital transmission standards develop, we will have to acquire additional licenses for new essential patents.

In January 1999 we entered into a cross license agreement with Motorola Inc. Under this agreement, Motorola and Wavecom each grant to the other a license to use the intellectual property rights it owns or develops for the GSM standard. In addition, the agreement requires us to pay to Motorola a license fee for each GSM product we sell. The agreement remains effective as long as both Motorola and Wavecom continue to manufacture products which use the GSM standard and as long as the licensed GSM/GPRS essential patents remain in force.

In September 2001, we entered into a cross license agreement with Philips N.V. whereby Philips has granted us a license to use GSM/GPRS essential patents that Philips owns or develops for the GSM/GPRS standard in consideration for our payment to Philips of a fixed fee covering all past and future royalties due. In addition, under this agreement, we have granted Philips a royalty bearing license to use GSM/GPRS essential patents that we own or develop for the GSM/GPRS standard. The agreement remains in effect for so long as the licensed GSM/GPRS essential patents remain in force.

In January 2002, we entered into a cross license agreement with Siemens A.G. whereby Siemens has granted us a license to use GSM/GPRS essential patents that Siemens owns or develops for the GSM/GPRS standard in consideration for our payment to Siemens of a fixed fee covering past royalties due and a royalty percentage based on each GSM/GPRS product we sell in the future. In addition, under this agreement, we have granted Siemens a royalty free license to use GSM/GPRS essential patents that we own or develop for the GSM/GPRS standard. The agreement remains in effect for so long as the licensed GSM/GPRS essential patents remain in force.

In order to produce and market CDMA-based WISMO modules and wireless modems, we entered into a cross license agreement with Qualcomm in May 2002. Under this agreement, Qualcomm has granted us a license to use CDMA essential patents that Qualcomm owns or is able to license for the CDMA standard in consideration for our payment to Qualcomm of a up-front fee and a royalty percentage based on each CDMA product we sell in the future. In addition, under this agreement, we have granted Qualcomm a royalty free license to use CDMA essential patents that we own or develop for the CDMA standard. We have been granted an option to include WCDMA and/or TD-SCDMA at Qualcomm's then-standard terms and conditions for a license to such standard.

To protect the intellectual property we have developed in the course of our research and development activities, we rely upon a variety of legal measures, including patents and patent applications. Our employment agreements contain provisions to protect our trade secrets by forbidding the unauthorized disclosure of confidential information. Our independent contractors are required to enter into confidentiality agreements that also assign us rights to inventions they make while engaged by us. We have also entered into non-disclosure agreements to protect our confidential information delivered to third parties in conjunction with possible collaborations and for other purposes.

In October 1999, we established an employee patent incentive program designed to recognize employee-inventors and to encourage employee-inventors to sponsor patent applications. The patent incentive program provides French employees who have

developed an invention in the course of their employment with cash compensation if and when a patent application is filed by us and a second cash payment upon the effective commercial use of the patent within five years after the filing of the patent.

We currently own seven French patents expiring at various dates beginning in 2015. We have filed twelve other patent applications currently undergoing evaluation, and have begun proceedings for the extension of some of our patents to other jurisdictions.

We have registered trademarks or filed applications for such registration for "WAVECOM", "WISMO", "WVCM", "WISMO WITHIN", "CHIP-PAC", "THE HEART OF THE MATTER", "MUSE Platform" and "MODULAR USER SOFTWARE ENVIRONMENT" in France. We have also registered these trademarks or filed applications for such registration in certain other jurisdictions. We do not have the trademark "Wavecom" registered in North America or Japan, where there are several other companies using that name.

Backlog

At December 31, 2001 our product backlog was approximately €129 million. We include in our backlog all accepted product purchase orders for which delivery has been specified within one year, however, we do not require customers to place firm orders more than four months in advance. Product orders in our backlog are subject to changes in delivery schedules or to cancellation at the option of the purchaser without significant penalty. Our backlog may vary significantly from time to time depending upon the level of capacity of our suppliers and subcontractors available to satisfy unfilled orders. Accordingly, although useful for scheduling production, backlog as of any particular date may not be a reliable indicator of sales for any future period.

Capital expenditures

Capital expenditures since January 1, 1998 have related primarily to the purchase of laboratory, testing and computer equipment, principally at the company headquarters in France. Total expenditures on property and equipment were €3.5 million in 1999 (€2.7 million internally financed and €0.8 million financed by capital leases), €8.4 million in 2000 (all internally financed), and €10.3 million in 2001 (all internally financed).

Corporate Information

Wavecom S.A. is a *société anonyme*, or limited liability company, organized under the laws of France in 1993 with authorization to operate for a period of 99 years, which period may be extended by vote of the shareholders. Our registered offices are at 12 boulevard Garibaldi, 92442 Issy-Les-Moulineaux Cedex, France and our telephone number is (011 33 1) 46 29 08 00. Our principal offices in the United States are at 4810 Eastgate Mall, 2nd Floor, San Diego, CA 92121, and our telephone number at that address is +1 858 362 0101.

Wavecom S.A. owns majority interests in four subsidiaries:

Wavecom Asia Pacific Limited, Hong Kong, Republic of China (wholly owned)

Wavecom Inc., San Diego, California, United States (wholly owned)

Wavecom Korea Co., Ltd., Seoul, South Korea (wholly owned)

Arguin Inc., San Diego, California, United States (37.77% owned, 61.88% of voting rights controlled)

Property, Plant and Equipment

Our headquarters are located in Issy-les-Moulineaux, a suburb of Paris, France, where we lease approximately 10,000 square meters of office space in two buildings. Leases for a portion of our original 3,500 square meter facility terminate at December 31, 2002, but we expect to be able to renew the leases or find new office space in the vicinity covering all or most of this space, although at higher rental rates. In response to our need for additional office space, we obtained an additional 6,500 square meters of office space in Issy-les-Moulineaux in June 2001. We also rent temporary office space in Issy-les-Moulineaux from time to time in order to meet short-term space needs. In order to attract skilled personnel who do not wish to live in the metropolitan Paris area, we have leased an additional 280 square meters of office space in Rennes, in the Brittany region of France in 2001. We also currently lease office space in San Diego, Tokyo, Hong Kong, Seoul, Taipei and Darmstadt, Germany.

Item 5. Operating and Financial Review and Prospects

The following discussion of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and the related notes, and the other financial information included elsewhere in this annual report. Our consolidated financial statements and our quarterly financial results included in this discussion have been prepared in accordance with U.S. GAAP. This discussion includes forward-looking statements based on assumptions about our future business. Our actual results could differ materially from those contained in the forward-looking statements.

Background

Wavecom develops, markets and sells a line of wireless standard modules, known as WISMO modules for use in mobile telephones and other wireless applications based on GSM and GPRS mobile communications standards. Our products incorporate digital wireless technology that we have developed since June 1993, when Wavecom was founded. Between 1993 and 1996, we focused mainly on providing engineering services for our clients' customized digital wireless products. We also licensed technology to the clients and received license fees and royalties based on the clients' sales of the end product.

In 1996, we realized that there was a developing market for an integrated wireless module that could be used as a component in mobile phones and other wireless applications. Building on the engineering expertise gained during our early years, we developed the WISMO module. We began commercial production and sales of the WISMO module in January 1997. In November 2001, we commenced production of the WISMO Pac 3000 series (formerly WISMO3) module, although we did not ship significant quantities of this product before the first quarter of 2002. During 2001, we sold principally the WISMO Quik 2300 series (formerly WISMO2C) module in two versions, one operating on the 900MHz and 1800MHz bands and the other operating on the 900MHz and 1900MHz bands. Mass production of the WISMO Quik module was launched in March 2000. Through mid-2000, we sold the WISMO1 line in four different GSM versions, two that operate on the 900MHz band, one that operates on the 1800MHz band and one that operates on the 1900MHz band. During 1999 and the first half of 2000, we also sold the WISMO2A module which was available only on the 900MHz band.

In the first quarter of 2002, we produced prototypes of the next generation of the WISMO Quik module, the 2400 series. The WISMO Quik 2400 module is fully compatible with the WISMO Quik 2300 in terms of mechanical footprint and software and hardware interfaces, but is 40% thinner (at 3.9 millimeters) and 45% lighter (at 11 grams) than the WISMO Quik 2300 module. We expect to commence mass production of the WISMO Quik 2400 module in the second quarter of 2002. We expect to commence mass production of a quad-band version of the WISMO Quik module, which will operate on the 850MHz, 900MHz, 1800MHz and 1900MHz bands, and a CDMA version of the WISMO Quik module, in the second half of 2002. We believe that we will be the first company to have a quad-band solution on the market and the first company to have pin-to-pin compatible GSM/GPRS and CDMA wireless modules.

Due to the delays in the stabilization of the GPRS networks and the decision by operators to add new functions, we decided not to sell in volume the GPRS version of our WISMO modules during 2001, although we did provide some product to our customers for testing purposes. We currently believe that networks should be stable enough by mid-2002 to make commercial launch of our GPRS WISMO modules possible in the third quarter of 2002.

For additional information regarding our plans for introducing additional versions of WISMO modules, please see "Item 4—Information on the Company—Products—New WISMO modules under development."

In addition to WISMO modules, we currently sell both an external, stand-alone wireless modem and an integrated wireless modem that is intended to be soldered onto a printed circuit board. Both wireless modems incorporate the WISMO module. We sell wireless modems, which have regulatory approval, as finished products. The external wireless modem was introduced in late 1997 and the integrated wireless modem was introduced in mid-2000. To meet the specific requirements of one customer, we also sold fully assembled mobile telephones based on the WISMO module during 1999 only.

The WISMO module is designed to be used not only in mobile telephones and wireless modems, but also in other wireless applications. We believe that great growth potential for the WISMO module is in applications other than mobile phones, such as automatic vehicle location systems, handheld electronic devices, such as personal digital assistants, and telemetry applications where the measurement and transmission of data is necessary. None of these new markets is well established, however, and we cannot be certain that they will develop.

The sales prices of WISMO modules and our wireless modems were subject to the same downward pressure in 1999 as affected the mobile telephone industry in general. In 2000, we believe that our average sales prices declined at a faster rate than the general industry as we moved from small volume, higher priced contracts in the first half of the year, to high volume, lower priced contracts beginning in the third quarter. In 2001, our average sales price declined 17.4% from the fourth quarter of 2000 to the fourth quarter

of 2001. We believe that downward pressure on the prices of mobile telephones may continue in the future and that similar pressure will affect the newer types of wireless communications applications in which our products are used or may be used. We therefore expect a continuing decline in the sales prices of our products. In 2001, the average price of a WISMO module was €76 compared to €93 in 2000. The actual price we charge for WISMO modules varies considerably and depends on the application for which they are used, the amount of software customization required and the volume ordered. In 2001, our average sale price for wireless modems was €136 compared to €154 in 2000. As with WISMO modules, the prices may vary significantly depending on volume.

We also provide services to customers to help them to integrate the WISMO module into their applications. However, we anticipate that service revenues will continue to decrease as a percentage of our sales.

In the past, we received license fees and royalties related to the technology development services we provided in years prior to 1997. Royalties were based on our clients' sales of products incorporating our designs and technology. In 1997, we stopped licensing our technology in this way. The products incorporating the licensed technology reached the end of their commercial lives in the first quarter of 1999 and we do not expect to receive future revenues from technology licenses or royalties.

In 2001 and 2000, our operating costs increased substantially, largely due to increased research and development spending, although selling, general and administrative expenses increased as well as we added headcount to meet the expanding volume of business. All research and development costs are expensed as incurred. Research and development spending increased from €11,913,000 in 1999 to €16,133,000 in 2000, and to €32,634,000 in 2001. We also added management and administrative infrastructure to manage our growth as we increased the volume of activity and expanded internationally. We recorded operating income of €3.0 million in 2001 and an operating loss of €19.8 million in 2000, and we generated €50.0 million in cash from operating activities in 2001 (while we used €8.6 million in 2000). We expect operating costs to increase in 2002 compared to 2001, but we anticipate that the rate of increase will be lower than the rate of increase in revenues in 2002.

Our customer base has been predominantly international since 1995, with the majority of our revenues coming from Asia and from European customers outside of France, including Germany, Italy, Spain and the United Kingdom. Revenues from Asia represented 84% of our sales in 2001 and a third of our sales in 2000. In order to better serve the Asian markets, we established a branch office in Japan in early 2000 and a branch office in Korea in January 2001, in addition to our Hong Kong-based subsidiary. We have plans to open representative offices in Taiwan and a branch office or subsidiary in mainland China in 2002. We also have a subsidiary based in San Diego and a sales office in Darmstadt, Germany.

Critical Accounting Judgments and Estimates

In response to the SEC's Release No. 33-8040, "Cautionary Advice Regarding Disclosure About Critical Accounting Policies," we identified the most critical accounting principles upon which our financial status depends. We determined that the critical principles are those that involve the most complex or subjective judgments and estimates. Our judgment used to determine the appropriate assumptions and to make estimates is based on our historical experience, terms of existing contracts, our observation of trends in the industry, information provided by our customers and information available from other outside sources. We believe that our most critical accounting estimates are:

- *Provision for warranty services:* We provide for the estimated cost of product warranty service at the time the revenue is recognized. While we have put in place extensive product quality programs and processes, our warranty obligation is affected by product failure rates, our ability to repair defective products and service delivery costs incurred in correcting a product failure. Should actual product failure rates, repair rates or service delivery costs differ from our estimates, revisions to the estimated warranty accrual would be required.
- *Provision for royalty payment for intellectual property rights:* Our products are designed to conform to certain wireless industry standards which are based on certain patented technologies that we use. We have concluded license agreements with three patent holders, under which we pay royalties. We are in the process of negotiating with other patent holders. We record a provision for royalty payments that we estimate will be due to these patent holders once we conclude license agreements with them. The provision is based on a percentage of consolidated product revenues and is recorded at the time revenue is recognized. Should the actual royalties to be paid under license agreements signed in the future differ from our estimates, the royalty provision would have to be revised.

Both of these provisions have an impact on the determination of cost of goods sold. Both are recorded in "other accrued expenses" on the balance sheet and are described more fully in the footnotes to our annual consolidated financial statements.

Results of Operations

Fiscal year 2001 compared to fiscal year 2000

Revenues

Total revenues increased 392% from €65,573,000 in 2000 to €322,664,000 in 2001. The increase reflects a 404% increase in product sales and a 102% increase in service revenues.

Most of our revenues are from export sales. In 2001, 11% of our revenues were from customers in European countries excluding France, particularly Germany and Italy, compared to 52% in 2000. Customers in Asian countries accounted for 84% of our revenues in 2001 (compared to 33% in 2000), French customers made up 2% of total revenues in 2001 (compared to 3% in 2000), 1% came from customers in the Americas (compared to 3% in 2000) and 2% came from customers in the rest of the world (compared to 9% in 2000).

Product sales. Revenues from sales of our products totaled €317,571,000 in 2001 compared to €63,055,000 in 2000. Sales of WISMO modules accounted for 90% of total product sales in 2001, while 10% was from sales of wireless modems. The increase in product revenues in 2001 was due principally to increased sales of WISMO modules for telephony applications, but in absolute terms sales in all our target markets (multimedia, automotive and telemetry as well as telephony) increased.

Technology development and other services. Revenues from services increased from €2,518,000 in 2000 to €5,093,000 in 2001. This increase reflects the increasing completion of product integration services for WISMO module customers. We recognize service revenues for development work once all work is completed. At December 31, 2001, we had €2.4 million in deferred service revenue on the balance sheet relating to development services in progress.

Cost of revenues

Cost of goods sold. Cost of goods sold consists primarily of the cost of components and our manufacturers' charges. Our cost of goods sold increased from €51,457,000 in 2000 to €254,658,000 in 2001. Our gross profit on product sales in 2001 was €62,913,000 (19.8% of product revenues) compared to €11,598,000 (18.4% of product revenues) in 2000.

In 2001, our product gross margin increased in each of the four quarters after declining substantially in the second half of 2000. The improvements in gross margin resulted principally from two factors:

- We improved oversight of our third-party manufacturers and of the manufacturing process during 2001 by replacing our director of manufacturing in December 2000 and reorganizing the industrialization and logistics teams beginning in the first quarter of 2001. As a result of process improvements, we were able to increase yields and reduce production time, which in turn translated into lower costs and higher capacity on existing production lines.
- During 2001 industry demand for electronic components slowed, resulting in an over-supply compared to the industry-wide shortage which we faced in 2000. Consequently, market prices for components we require for our products declined over the course of the year. In addition to these more favorable market conditions, we also benefited from the increased negotiating power accompanying the substantial growth in our production volumes (approximately 4,000,000 units sold in 2001 compared to 580,000 units sold in 2000). Lastly, during 2001 we reinforced our purchasing team and began negotiating more aggressively with both our third-party manufacturers and the component suppliers. We believe this had a significant favorable impact on our ability to reduce our cost of goods sold.

Cost of services. Our cost of providing services increased slightly from €4,522,000 in 2000 to €4,718,000 in 2001. We realized a gross profit from services of €375,000 in 2001 compared to a loss on services of €2,004,000 in 2000. The variability in gross profit or loss on services reflects the fact that we expense all development service costs as incurred, while we recognize service revenue only when the project is complete and the services have been accepted by the customer.

Operating expenses

Research and development. We spent €32,634,000 (10.1% of revenues) on research and development in 2001 compared to €16,133,000 (24.6% of revenues) in 2000. This 102% increase in our research and development spending reflects, in part, the development efforts related to new WISMO modules as we began to expand our product line, and to improved software interfaces and development tools. Research and development expenses also reflect the significant resources being used to adapt our existing products for new digital wireless standards, including GPRS and UMTS.

Sales and marketing. Sales and marketing expenses in 2001 totaled €12,416,000 (3.8% of revenues) compared to €5,836,000 (8.9% of revenues) in 2000. This doubling of sales and marketing expenses in 2001 reflects an increase in our presence in the Asia-Pacific and U.S. markets through our local offices, as well as substantial increases in the staffing of our marketing department. We also incurred increased promotional expense related to the launches of the WISMO Pac module series and the MUSE Platform in 2001. We increased the number of direct sales personnel from 13 at the end of 2000 to 15 at December 31, 2001.

General and administrative. General and administrative expenses increased 138% from €5,598,000 (8.5% of revenues) in 2000 to €13,297,000 (4.1% of revenues) in 2001. We increased the number of personnel in our general and administrative services (including finance, legal, corporate communications, human resources, and information systems departments from 52 at December 31, 2000 to 77 at December 31, 2001. These increases accompanied the growth of our business and the development of our subsidiaries in Asia and in the United States. In 2001, we also more than doubled the amount of our office space (primarily with the leasing of our new 6,500 square meter corporate headquarters in France and incurred related moving costs.

Amortization of goodwill. In December 2001, we purchased the tangible and intangible assets of Iconn Wireless, a San Diego-based CDMA-technology company, for \$4.6 million (€5.3 million) of which \$4.1 million (€4.6 million) has been allocated to goodwill. In accordance with new U.S. accounting rules issued in 2001 (Statement of Financial Accounting Standards No. 142), this goodwill is not being amortized. However the ongoing value of the goodwill will be subject to review and any impairment in value will result in a write-down of the value. In October 2000, we purchased for €3,454,000 in cash a 61.88% interest in a San Diego-based software development company. As a result of this acquisition, we recorded goodwill of €1,326,000 which was being amortized over five years. The charge of €278,000 represents twelve months of amortization related to our October 2000 acquisition. The goodwill related to this acquisition will cease being amortized as of January 1, 2002.

Deferred compensation amortization. Deferred compensation expense of €7,366,000 was recorded in connection with the issuance of founders' warrants and stock options in September 1998 and February 1999. This deferred expense is amortized on a straight-line basis over the four-year vesting periods of the warrants and options. Consequently, amortization expense of €1,711,000 was recorded in 2001, compared to €1,758,000 in 2000.

Other income (expense)

Interest income, net. We recorded net interest income of €3,827,000 in 2001, compared to €2,745,000 in 2000. The increase in net interest income results from the investment of cash proceeds from our public offering in June 2000 in low-risk securities, net of interest expense related to capital leases.

Foreign exchange gain (loss). We had a net foreign exchange gain of €142,000 in 2001 compared to a net gain of €989,000 in 2000, due primarily to changes in the value of the U.S. dollar (the primary currency other than the euro in which we invoice sales and make purchases) compared to the euro.

Provision for loss on long-term investment. In October 2000, we invested approximately \$1 million (€1.2 million) in a privately-owned developer of Bluetooth technology. In the fourth quarter of 2001, we recorded a provision in the amount of €716,000 for the estimated loss in value of this investment, based on the lower valuation of the company in later financing rounds (in which we did not participate).

Income tax expense (benefit). Our €2,299,000 net tax benefit in 2001 (€1,534,000 in 2000) represents principally French research tax credits, offset slightly by tax expense in certain jurisdictions. Research tax credits are received in cash in the fourth year after the period in which they are recorded, if they are not used to offset income taxes payable in France prior to that time. We recorded no tax expense in most jurisdictions, including France, due to the existence of tax loss carryforwards in excess of taxable income.

Fiscal year 2000 compared to fiscal year 1999

Revenues

Total revenues increased 79.4% from €36,560,000 in 1999 to €65,573,000 in 2000. The increase reflects an 82.4% increase in product sales and a 35.9% increase in service revenues, offset in part by the absence of license fees and royalties in 2000 compared to €144,000 in 1999.

Most of our revenues are from export sales. In 2000, 52% of our revenues were from customers in European countries outside of France, particularly Germany and Italy, compared to 77% in 1999. Customers in Asian countries accounted for 33% of our revenues in 2000 (compared to 6% in 1999), French customers made up 3% of total revenues in 2000 (compared to 10% in 1999) and 12% came from customers in the rest of the world (compared to 7% in 1999).

Product sales. Revenues from sales of our products totaled €63,055,000 in 2000, compared to €34,563,000 in 1999. Sales of WISMO modules accounted for 62% of total product sales in 2000, while 38% was from sales of wireless modems. The increase in product revenues in 2000 was due principally to increased sales of WISMO modules for telephony and multimedia applications as we began shipping to new customers under contracts signed in the second half of 1999 and early 2000.

Technology development and other services. Revenues from services increased from €1,853,000 in 1999 to €2,518,000 in 2000. This increase reflects the increasing completion of product integration services for WISMO module customers. At December 31, 2000, we had €4.2 million in deferred service revenue on the balance sheet relating to development services in progress.

Cost of revenues

Cost of goods sold. Cost of goods sold consists mostly of the cost of components and our manufacturers' charges. Our cost of goods sold increased from €26,236,000 in 1999 to €51,457,000 in 2000. Our gross profit on product sales in 2000 was €11,598,000 (18.4% of product revenues) compared to €8,327,000 (24.1% of product revenues) in 1999.

In 2000, our product gross margin declined as a result of three primary factors:

- Average selling prices for our products declined significantly as we began to deliver pursuant to large volume contracts with lower selling prices beginning at the end of June 2000.
- The industry-wide components shortage had a negative impact on our costs. Component costs did not decline as we had expected when we had established our pricing policies, and in some cases increased; we were limited in our ability to pass these cost increases on to our customers for commercial rather than contractual reasons. During the third quarter, the shortage of supply of our memory component resulted in a production stoppage for two weeks, which resulted in additional production and inventory costs.
- The WISMO Quik 2300 module entered into mass production in March 2000 and initially included numerous manual steps in the production process that negatively effected yield as production volumes increased significantly in the third and fourth quarters. In the fourth quarter, engineering changes were implemented to reduce the manual steps in the process and we hired a new director of manufacturing in December 2000 to focus on production efficiency. Additional engineering changes have been planned in the first half of 2001 in order to fully automate the WISMO Quik 2300 module production process.

Cost of services. Our cost of providing services increased from €2,148,000 in 1999 to €4,522,000 in 2000. The loss on services increased from €295,000 in 1999 to €2,004,000 in 2000. The loss in 2000 reflects the fact that we expense all development service costs as incurred, while we recognize service revenue only when the project is complete and the services have been accepted by the customer.

Operating expenses

Research and development. We spent €16,133,000 (24.6% of revenues) on research and development in 2000 compared to €11,913,000 (32.6% of revenues) in 1999. This 35.4% increase in our research and development spending reflects, in part, the development efforts related to the new integrated wireless modems, the dual-band versions of the WISMO2 module, the WISMO3 module and the WISMO5 module. We began shipping our integrated wireless modems in the second quarter of 2000 and the dual-band version of the WISMO2 module in the first quarter of 2000. Research and development expenses also reflect the significant resources used to adapt our existing products for new digital wireless standards, including GPRS.

Sales and marketing. Sales and marketing expenses in 2000 totaled €5,836,000 (8.9% of revenues) compared to €3,412,000 (9.3% of revenues) in 1999. In 2000, our sales and marketing expenses increased 71.0% as we targeted new wireless applications markets and increased our presence in the Asia-Pacific and U.S. markets through our Hong Kong and San Diego offices. We incurred expenses relating to the opening of a branch office in Tokyo in April 2000 and a branch office in Seoul in January 2001. We increased the number of direct sales personnel from eight at the end of 1999 to 13 at December 31, 2000.

General and administrative. General and administrative expenses increased 82.3% from €3,070,000 (8.4% of revenues) in 1999 to €5,598,000 (8.5% of revenues) in 2000. We increased the number of personnel in our general and administrative services (including finance, legal, corporate communications, human resources, and information systems departments from 30 at December 31, 1999 to 52 at December 31, 2000. Our initial public offering on the Nasdaq and *Nouveau Marché* stock markets in

June 1999 increased ongoing legal and administrative expenses related to financial communication and investor relations.

Amortization of goodwill. In October 2000, we purchased for €3,454,000 in cash a 61.88% interest in a San Diego-based software development company. As a result of this acquisition, we recorded goodwill of €1,326,000 which we are amortizing over five years. The charge of €47,000 represents two months of amortization.

Deferred compensation amortization. Deferred compensation expense of €7,366,000 was recorded in connection with the issuance of founders' warrants and stock options in September 1998 and in February 1999. This deferred expense is amortized on a straight-line basis over the four-year vesting periods of the warrants and options. Consequently, amortization expense of €1,758,000 was recorded in 2000 compared to €1,608,000 in 1999.

Other income (expense)

Interest income, net. We recorded net interest income of €2,745,000 in 2000 compared to net interest expense of €127,000 in 1999. The net interest income in 2000 results from the investment of cash proceeds from our public offerings in June 1999 and June 2000 in low-risk securities, net of interest expense related to capital leases entered into prior to 2000. The net interest expense in 1999 reflected interest paid on lines of credit and other financing facilities in the first half of 1999, prior to our initial public offering.

Foreign exchange gain (loss). We had a net foreign exchange gain of €989,000 in 2000 compared to a net loss of €80,000 in 1999, due primarily to changes in value of the U.S. dollar (the primary currency other than the euro in which we invoice sales and make purchases) compared to the euro. In particular, we had unrealized gains in the amount of €1,627,000 at December 31, 2000 related primarily to large dollar-denominated receivables on our balance sheet.

Income tax expense (benefit). Our €1,534,000 tax benefit recorded in 2000 (€736,000 in 1999) represents research tax credits. We recorded no tax benefit for the tax loss carryforwards generated by the 2000 loss.

Selected quarterly operating results

The following table sets forth a summary of Wavecom's unaudited quarterly operating results for each of the eight fiscal quarters in the period ended December 31, 2001. We have derived this information from our unaudited interim consolidated financial statements which have been prepared on a basis consistent with our audited consolidated financial statements. The results of operations for any quarter are not necessarily indicative of results for any future period.

	Three months ended							
	March 31, 2000	June 30, 2000	Sept. 30, 2000	Dec. 31, 2000	March 31, 2001	June 30, 2001	Sept. 30, 2001	Dec. 31, 2001
	(unaudited) (in thousands, except share and per share amounts)							
Revenues:								
Product sales	€ 7,142	€ 10,962	€ 15,322	€ 29,628	€ 51,239	€ 72,421	€ 88,972	€ 104,939
Technology development and other services	48	292	896	1,281	2,785	1,350	582	376
Total revenues	7,190	11,254	16,218	30,909	54,024	73,771	89,554	105,315
Cost of revenues:								
Cost of goods sold	4,705	8,388	12,658	25,705	43,469	59,987	70,094	81,108
Cost of services	756	1,098	1,295	1,373	849	959	1,231	1,679
Total cost of revenues	5,461	9,486	13,953	27,078	44,318	60,946	71,325	82,787
Gross profit	1,729	1,768	2,265	3,831	9,706	12,825	18,229	22,528
Operating expenses:								
Research and development	3,719	3,591	3,888	4,934	6,167	7,122	9,162	10,183
Sales and marketing	1,275	1,432	1,271	1,858	2,696	2,470	3,320	3,929
General and administrative	1,032	1,261	1,303	2,004	2,653	3,414	3,767	3,464
Amortization of goodwill	—	—	—	47	66	74	69	69
Deferred compensation amortization	439	439	439	439	431	431	431	418

Total operating expenses	6,465	6,723	6,901	9,282	12,013	13,511	16,749	18,063
Operating income (loss)	(4,736)	(4,955)	(4,636)	(5,451)	(2,307)	(686)	1,480	4,465
Interest and other financial income (expense), net	55	251	1,133	2,294	244	923	2,194	607
Provision for loss on long-term investment	—	—	—	—	—	—	—	(716)
Income (loss) before minority interests and income taxes	(4,681)	(4,714)	(3,503)	(3,157)	(2,063)	237	3,674	4,356
Minority interests	—	—	—	6	118	132	324	230
Income (loss) before income taxes	(4,681)	(4,704)	(3,503)	(3,151)	(1,945)	369	3,998	4,586
Income tax expense (benefit)	—	—	—	(1,534)	(399)	(64)	(223)	(1,613)
Net income (loss)	€ (4,681)	€ (4,704)	€ (3,503)	€ (1,617)	€ (1,546)	€ 433	€ 4,221	€ 6,199
Basic net income (loss) per share	€ (0.35)	€ (0.35)	€ (0.24)	€ (0.11)	€ (0.11)	€ 0.03	€ 0.29	€ 0.42
Diluted net income (loss) per share	€ (0.35)	€ (0.35)	€ (0.24)	€ (0.11)	€ (0.11)	€ 0.03	€ 0.27	€ 0.40
Shares used in computing basic net income (loss) per share	13,423,469	13,606,813	14,605,598	14,669,285	14,692,300	14,706,857	14,718,631	14,762,381
Shares used in computing diluted net income (loss) per share	13,423,469	13,606,813	14,605,598	14,669,285	14,692,300	15,372,319	15,384,206	15,399,691

We believe that period-to-period comparisons of our operating results are not necessarily meaningful. Our quarterly and annual operating results have fluctuated in the past and are likely to fluctuate significantly in the future. You should not rely on them to predict future performance. Our revenue may fluctuate due to the amount of new customer orders and the timing in beginning production and delivery of these new orders. The amount and timing of our operating expenses may fluctuate significantly in the future as a result of the timing of these orders and our development of new products and technologies. For a discussion of factors which may affect our quarterly and annual operating results, see "Item 3—Key Information—Risk Factors—Our quarterly revenues fluctuate significantly and may affect the price of our shares and ADSs."

Liquidity and capital resources

From our inception in 1993 until April 1999, we financed our operations primarily through short- and long-term bank borrowings, including borrowings secured by receivables, and capital lease financing. Note 4 to our consolidated financial statements included in this annual report provides detail on these borrowings. Since April 1999, we have financed our operations using the net proceeds from the issuance of convertible debt (€4.6 million), our initial public offering (€36.1 million) in June 1999, and our second public offering (€96.5 million) in June 2000.

We had negative cash flow from operating activities of €11,749,000 in 1999 and €8,579,000 in 2000. While we had positive cash flow from operations in each quarter of 2001, we could have negative cash flow from time to time if revenues decline as our current plans call for increased spending on research and development and headcount increases in sales and marketing and in our production, logistics and quality teams. We had working capital of €89,964,000 at December 31, 2001.

At December 31, 2001, our debt and capital lease obligations (including the current portion), amounted to €917,000 compared to debt and capital lease obligations of €1,594,000 at the end of 2000. We had €131,980,000 in cash, cash equivalents and short-term investments at December 31, 2001.

At December 31, 2001 we had a multi-currency overdraft facility with a French bank allowing for maximum borrowings of €2,287,000. The overdraft facility bears interest based on a market rate (Fed Funds) plus a margin of 1.5%. No amounts had been drawn on this facility at December 31, 2001. The overdraft facility does not have a fixed term.

At December 31, 2001, we had a €2,868,000 dedicated line of credit used for the issuance of a bank guarantee to secure lease payments under a new office lease signed in December 2000. This line was secured by pledged certificates of deposit in the amount of €2,994,000 at December 31, 2001.

The average rate on our overdraft facilities corresponded to an effective rate of 3.02% at December 31, 2001 and an average rate of 7.01% for the year ended December 31, 2001. The dedicated lines of credit were remunerated by a fixed fee rather than by interest.

At December 31, 2001, we had no material commitments for capital expenditures during 2002. Our future capital requirements, the timing and amount of expenditures, and the adequacy of funds available to us will depend on our success in developing and selling new and existing products, on technological and market developments in the wireless communications industry and on other factors. Based on our current plans, we believe that existing cash and cash flows generated by operations will be adequate to satisfy our capital requirements at least through 2002.

The company's contractual obligations consist principally of obligations under capital leases, operating leases, and other short-term obligations.

Contractual obligations	Payments due by period (amounts in millions)				
	Total	Less than 1 year	1-3 years	4-5 years	After 5 years
Short-term debt	€ 0.5	€ 0.5			
Capital lease obligations	0.4	0.2	€ 0.2		
Operating leases	€ 46.0	8.3	15.4	€ 13.7	€ 8.6
Total contractual cash obligations	€ 46.9	€ 9.0	€ 15.6	€ 13.7	€ 8.6

At December 31, 2001, we had purchase commitments with our third-party manufacturers for future deliveries of products principally during the first quarter of 2002. These purchase commitments totaled approximately €63 million.

Interest rate risk

At December 31, 2001, €83,680,000 in cash equivalents were invested in short-term money-market accounts bearing variable rates of interest. We had no variable rate debt at December 31, 2001.

Impact of currency fluctuations

We publish our consolidated financial statements in euro. The functional currency of the parent company also is the euro (previously the French franc). In 2001, 80% of our total revenues were recorded in U.S. dollars and virtually all the rest was in euro. We purchase many of our components for U.S. dollars, while most of our other operating expenses are in euros. Dollar purchases and expenses represented approximately 73% of our cost of revenues and operating expenses in 2001. A strengthening of the euro against the U.S. dollar and other currencies in which we receive revenues could reduce our reported revenues and our reported operating and net results. We incurred net foreign exchange gains of €142,000 in 2001 and €989,000 in 2000 and a net foreign exchange loss of €80,000 in 1999.

We have not previously engaged in, and do not now contemplate entering into, significant or speculative currency hedging transactions. From time to time, we have entered into short-term currency swap agreements in order to hedge specific transactions. We may enter into such transactions or others on a non-speculative basis to the extent that we may in the future have substantial foreign currency exposure.

Item 6. Directors, Senior Management and Employees

Board of directors

In accordance with French law governing a *société anonyme*, as modified by a new act dated May 2001, our business is managed by our board of directors and by our Chairman and Chief Executive Officer (*Président Directeur Général*) who, subject to the prior authorization of the board of directors for certain decisions, has full authority to manage Wavecom's affairs. The board of directors has appointed Mr. Alard as our Chairman and Chief Executive Officer.

Under our by-laws, each director is elected by the shareholders at an ordinary general meeting for a maximum three-year term. Each director must own at least one Wavecom share. Under French law, a director may be an individual or a corporation. Our board currently has five directors. Directors may resign at any time and their functions as members of the board of directors may be terminated at any time by the shareholders at a general meeting. Directors must resign at the age of 65. A director does not need to be a French national and there is no limitation on the number of terms that a director may serve. In case of removal without cause, members of the board of directors may be entitled to damages.

Under French law, our board of directors is responsible, among other things, for presenting accounts to our shareholders and convening shareholders' meetings. The board of directors also reviews and monitors our economic, financial and technical strategies.

Directors are required to comply with applicable law and with our by-laws. Our directors may be jointly and severally responsible for actions that they take contrary to Wavecom's interests. In addition, the Chairman of our board is individually responsible for any actions of this sort that he may take.

Under French commercial law and our by-laws, any transaction we enter into in which a member of our board of directors has a direct or indirect interest and that is not in the ordinary course of business and/or is not at arm's-length is subject to the prior consent of our board of directors. The interested director is not taken into account for the quorum calculation and his or her vote is not taken into consideration for the calculation of whether the transaction has been approved by the board of directors. Any such transaction concluded without the prior consent of our board of directors can be nullified if it causes prejudice to us. The interested director can be held liable on this basis. Our statutory auditor must be informed of the transaction within one month following its conclusion and must prepare a special report to be submitted to our shareholders for approval at their next meeting. In the event the transaction is not ratified by our shareholders at a shareholders' meeting, it will remain enforceable by third parties against us, but we may in turn hold the interested director and, in some circumstances, the other members of the board of directors, liable for any damages we may suffer as a result. In addition, the transaction may be cancelled if it is fraudulent. Moreover, certain transactions between a corporation and a member of its board of directors who is a natural person and/or its managing directors, if any, are prohibited under French commercial law.

Our board of directors has formed an audit committee to review, act on and report to the board of directors with respect to various auditing and accounting matters, including the scope of the annual audits, the selection, performance and compensation of our independent accountants and Wavecom's accounting practices. Our board of Directors has decided to form a Strategic Studies Committee, with the current members of the board and outside personalities to share information and opinions related to field of activity of Wavecom.

The following table sets forth the names of the directors of Wavecom, their current positions with Wavecom, the dates of their initial appointment as directors and the expiration dates of their current term. Dates specified for directors representing corporations relate to the entity represented. Each of our director's terms expires on the date of the annual general meeting of shareholders that approves our accounts for the year indicated in the table below. Cumulative voting is not permitted.

Name	Age	Current position	Initially appointed	Term expires
Michel Alard	47	Chairman of the Board of Directors	1993	2004
Aram Hékimian	46	Director	1993	2004
Delphis S.A. (represented by Marc Fourrier (age 48))	—	Director	1997	2003
Bernard Gilly	45	Director	1999	2002
Stephen Imbler	50	Director	2000	2002

Our audit committee consists of Delphis S.A. (represented by Marc Fourrier), Bernard Gilly and Stephen Imbler.

Executive officers and other senior employees

French law and our by-laws permit the board of directors to appoint up to five Deputy Chief Executive Officers nominated by the Chairman. The board of directors determines their specific management powers and responsibilities. Each Deputy Chief Executive Officer has the legal authority to sign contracts on behalf of Wavecom and may be individually responsible for actions taken that are contrary to Wavecom's interests. The board of directors has appointed Mr. Aram Hékimian as a Deputy Chief Executive Officer. Deputy Chief Executive Officers can be removed from their position as Deputy Chief Executive Officer by the board at any time. Other officers appointed by the board of directors serve until the termination of their employment contracts.

The following table sets forth the name and current position of each of our executive officers and senior employees:

Name	Age	Current position	Current position since
Michel Alard	47	Chairman of the Board of Directors and Chief Executive Officer	1993
Aram Hékimian	46	Deputy Chief Executive Officer and Acting Director of Marketing	1993

Jean-Charles Andreani	46	Director of Operations—Asia-Pacific	1998
Marc Cases	39	Director of Manufacturing	2000
Deborah Choate	38	Director of Finance and Administration, Chief Financial Officer	1998
Hervé Gagnard	37	Director of Corporate Development and Communications	2000
Patrick Guérillot	38	Director of Technology Strategy, Chief Technology Officer	2000
Philippe Guillemette	36	Director of Research and Development	2000
Hany Neoman	40	Director of Operations—Americas	2000
Charles Chaussonnier	36	Regional Director of Sales—Europe, Middle East and Africa	1996
Claire Oliver	40	Director of Quality Assurance	1999

There are no family relationships between any of the directors, executive officers or senior employees of Wavecom.

Michel Alard has served as Chairman of the Board since he co-founded Wavecom in 1993 and is currently the Chief Executive Officer (Président Directeur Général). From 1988 to 1993, Mr. Alard was GSM project manager for Matra Communications, a telecommunications equipment company. Before joining Matra, Mr. Alard was joint head of research and development for CCETT, a joint telecommunication research center of France Telecom and TéléDiffusion de France (TDF). From 1979 to 1982, Mr. Alard was a research engineer at SFP (Société Française de Production) and TDF, and was involved in television broadcasting. Mr. Alard has engineering degrees from the Ecole Polytechnique and the Ecole Nationale Supérieure des Télécommunications. Mr. Alard also serves on the board of directors of ILOG, S.A., a French software company listed on Nasdaq and the *Euronext Nouveau Marché*.

Aram Hékimian, a co-founder of Wavecom, has served as a director since 1993 and is currently the Deputy Chief Executive Officer (Président Directeur Général Délégué). He was head of the software department for Matra Communications from 1984 until 1993. Prior to joining Matra, he was a software engineer at Marben, a software engineering company, and CS Telecom, a company active in the field of telecommunications and railway signaling systems. Mr. Hékimian has a masters degree in science and technology from the University of Paris XII.

Marc Fourier served as a director of Wavecom individually from 1993 to 1997 and since 1997, on behalf of Delphis, a company that specializes in the creation and development of high technology companies. Since 1988, Mr. Fourier has served as President and Chief Executive Officer of Delphis. Mr. Fourier received engineering degrees from the Ecole Polytechnique and the Ecole Nationale des Ponts et Chaussées, and an M.S. from the Massachusetts Institute of Technology. Mr. Fourier also serves on the board of directors of ILOG, S.A., a French software company listed on Nasdaq and the *Euronext Nouveau Marché*.

Bernard Gilly has served as a director of Wavecom since April 1999. He is a partner in the Life Sciences team of Sofinnova Partners, a European venture capital fund, having joined them in December 2000. From 1992 to 2000, he served as Chief Executive Officer of Transgene, a French biotechnology company listed on Nasdaq and the *Euronext Nouveau Marché*. From 1994 to June 1997, Dr. Gilly also served as Research Director of bioMérieux. Prior to that, he served in various capacities at Pasteur Mérieux, including that of Vice President, Research and Development, from 1990 to 1994. He received his doctoral degree in bioeconomics from the University of Rennes, and holds an AMP from INSEAD.

Stephen Imbler has served as a director of Wavecom since March 2000. He served as President and Chief Operating Officer of Hyperion Solutions through the end of 2001, and currently serves as Advisor to the company. Prior to the 1998 merger between Arbor Software and Hyperion Software that created Hyperion Solutions, Mr. Imbler held the position of Senior Vice President and Chief Financial Officer at Arbor Software for three years. Prior to joining Arbor Software in 1995, Mr. Imbler served as Senior Vice President of Finance and Operations and Chief Financial Officer for Gupta Corporation, a software company. Mr. Imbler previously served as Vice President and Chief Financial Officer of Quick Response Services, Inc.; Vice President, U.S. Finance and Operations, and Vice President, Finance (Oracle Corporate) at Oracle Corporation; and Senior Tax Manager at Peat Marwick, San Francisco. Mr. Imbler received a master's degree in public accounting from the University of Texas and a bachelor's degree in piano performance from Wichita State University.

Jean-Charles Andreani has been Wavecom's Managing Director of the Asia-Pacific region and the managing director of our Hong Kong subsidiary, Wavecom Asia Pacific Limited, since May 1998. He is a member of the Executive Committee of Wavecom group. From 1992 until he joined Wavecom, Mr. Andreani was the deputy managing director of NEC France. He has a degree in engineering from the Ecole Nationale Supérieure des Télécommunications.

Marc Cases has served as Wavecom's Director of Manufacturing since December 2000. He is a member of the Executive Committee of Wavecom group. Prior to joining Wavecom, Mr. Cases was Manager of Corporate Sourcing at the research and development headquarters in Italy of Magneti Marelli, a Fiat subsidiary, from 1995 to 2000. From 1992 to 1995, he was an

electronic components purchasing manager for Magneti Marelli. His experience prior to Magneti Marelli included various positions at Sextant Avionique in France. Mr. Cases has an engineering degree from the Conservatoire National des Arts et Métiers and a business degree from the Institut Administration des Entreprises.

Deborah Choate has served as Wavecom's Chief Financial Officer since August 1998. She is a member of the Executive Committee of Wavecom group. Prior to joining Wavecom, Ms. Choate was a partner of Ernst & Young Audit in Paris. From 1984 until she joined the Paris office in 1991, Ms. Choate worked in Ernst & Young's San Francisco office and its national headquarters in Cleveland, Ohio. Ms. Choate has a B.S. in business administration from the University of California at Berkeley. She is a certified public accountant.

Hervé Gagnard, Wavecom's Director of Corporate Development and Communications, joined Wavecom in January 1997. From January 1997 until December 1999 he served as Director of Marketing and was named Director of Corporate Development and Communications on January 1, 2000. He is a member of the Executive Committee of Wavecom group. From 1994 until the end of 1996, Mr. Gagnard was the head of product marketing at TDR, a French paging services company. From 1991 to 1993, Mr. Gagnard was business development manager at Motorola Codex, the French telecommunications subsidiary of Motorola. From 1987 until he joined Motorola Codex, Mr. Gagnard worked in commercial engineering and marketing positions at Fininfo and Line Data, French information technology companies. Mr. Gagnard has an engineering degree from the Ecole Nationale Supérieure des Arts et Métiers.

Patrick Guérillot has been Wavecom's Director of Technology Strategic and Chief Technology Officer since December 2000. He was Director of Research and Development from April 1996 to December 2000. He is a member of the Executive Committee of Wavecom group. From 1991 until he joined Wavecom, Mr. Guérillot was project manager for consumer communications at Philips Consumer Communications in France. Prior to joining Philips, Mr. Guérillot was head of hardware for Sagem Telecom, a French telecommunications company. Mr. Guérillot has a degree in engineering from the Institut National des Sciences Appliquées.

Philippe Guillemette has been Wavecom's Director of Research and Development since December 2000. From January to December 2000, Mr. Guillemette was Assistant Director of Research and Development, and from June 1995 until December 1999 he was Director of Software Development. He is a member of the Executive Committee of Wavecom group. Prior to joining Wavecom in 1993, Mr. Guillemette was a software engineer at Nortel Networks. He has an engineering degree from the Ecole d'Ingenieurs en Electronique et Electrotechnique.

Hany Neoman has been Wavecom's Managing Director of the Americas region and the chief operating officer of our U.S. subsidiary, Wavecom, Inc., since October 2000. He is a member of the Executive Committee of Wavecom group. From 1997 until joining Wavecom, he was first a General Manager of the Southern European division, and then Marketing Vice President, of Sterling Commerce. From 1994 to 1997, Mr. Neoman was president and chief executive officer of NeoSystems Inc., a start up based in London and New York, specialized in modular digital applications, which he founded. From 1990 to 1992 he was Head of Sales for Western Europe for Intel's Business Communications Division. Mr. Neoman has a degree in Design Engineering from the University of Turin, Italy, and an MBA from Strathclyde University in Glasgow, UK.

Charles Chaussonnier has been Regional Director of Sales—Europe, Middle East and Africa since September 1996. From 1991 until he joined Wavecom, Mr. Chaussonnier was a project engineer and sales data broadcasting manager at TDF Radiodiffusion, a subsidiary of France Telecom. Mr. Chaussonnier has a degree in engineering from the Ecole Nationale Supérieure des Télécommunications.

Claire Oliver has been Wavecom's Director of Quality Assurance since October 1999. From October 1992 until she joined Wavecom, Ms. Oliver worked at Valeo Electronique, most recently as Director of Quality Assurance. From January 1989 to September 1992, she worked as a test and new product introduction engineer at NT Méridian and from November 1995 to December 1988 she worked as a development engineer for Honeywell S.A. She has a degree in engineering from the Ecole Centrale de Lyon.

Compensation of Directors and Officers

We paid a total of €1,664,000 in compensation to our directors, executive officers and senior employees (14 persons) during the year ended December 31, 2001. Non-salaried board members earn fees based on their attendance at board meetings. €30,000 in such board fees was earned by non-salaried board members during 2001. Under French law, the aggregate amount of attendance fees to be paid to our board members must be approved by our shareholders at a general meeting and such aggregate amount is allocated among board members by decision of the board.

In addition to cash compensation each of our executive officers and senior employees have received stock options or founders' warrants, and two non-salaried board members have received warrants. During 2001, we granted a total of 102,988 stock options

and founders' warrants to executive officers and senior employees, with exercise prices ranging from €26.68 to €41.09 and expiration dates ranging from March 14, 2011 to December 19, 2011. In June 2001, we granted 15,000 warrants with an exercise price of €34.66 and an expiration date of June 29, 2006 to each of Bernard Gilly and Stephen Imbler.

Michel Alard, Chairman of the Board and Chief Executive Officer, was paid €129,886 in base salary in 2001 (€133,774 in 2000), and earned a performance-based bonus of €45,000 in 2001. Aram Hékimian, Deputy Chief Executive Officer, was paid €128,972 in base salary in 2001, and earned a performance-based bonus of €45,000 in 2001. Compensation paid to our Chairman and our Deputy Chief Executive Officer is set by our board of directors. Messrs. Alard and Hékimian do not participate in such decision and both are excluded for purposes of the quorum and majority calculations. Performance-based bonuses for Mr. Alard and Mr. Hékimian are decided by the board of directors based on the achievement of personal and company objectives. No salaries or other compensation were paid by any group companies other than Wavecom S.A. Neither Mr. Alard nor Mr. Hékimian receive any fees related to their positions as members of the board of directors, nor are they granted warrants, stock options or founders' warrants.

None of the directors' service contracts provide for benefits upon termination of employment.

Share Ownership and Option and Warrant Information

Except as described in Item 7 below, as of June 14, 2002, each of our directors, executive officers and senior employees beneficially owns less than 1% of the share capital of Wavecom S.A (none of whom has voting rights which are different from our other shareholders).

On September 21, 1998, our shareholders authorized the creation of a stock option plan and a founders' warrant plan for employees. This plan was modified at a shareholders' meeting on December 19, 2001.

At a board meeting on October 26, 2001, our board waived the authorizations given by our shareholders at shareholders' meetings on December 20, 2000 and June 29, 2001 relating to options still in force but not yet granted (such waiver covering 313,865 options) and the authorizations given by our shareholders at a shareholders' meeting on June 29, 2001 relating to BCEs still in force but not yet granted (such waiver covering 132,850 BCEs).

As of December 31, 2001, a total of 23,000 shares were still authorised for issuance pursuant to the stock option plan and 16,500 shares were authorised for issuance under the founders' warrant plan.

As of December 31, 2001, there were outstanding options, founders warrants (BCEs) and warrants (BSAs) to purchase a total of 2,574,093 shares, of which options, founders warrants and warrants to purchase 308,393 shares were held by our current directors, executive officers and senior employees.

During 2001, the following ten employees were granted the largest number of stock options or founders' warrants:

Name	Position	Number of stock options or founders' warrants granted in 2001	Exercise price per stock option or founders' warrant	Final expiration date
Marc Cases*	Director of Manufacturing	30,000	€ 34.66	June 29, 2011
Sean Broderick	Director of CDMA Research & Development, Wavecom, Inc.	15,000	€ 41.09	December 19, 2011
Nicolas Bocquet	Senior Manager South Asia-Pacific Territory, Wavecom Asia-Pacific, Ltd.	15,000	€ 26.68	March 13, 2011
Alan Kholos	Strategic Alliance Director, Wavecom, Inc.	15,000	€ 41.09	December 19, 2011
Hany Neoman*	Managing Director—Americas Region	15,000	€ 34.66	June 29, 2011
Sandra Richards	Director of Operations, Wavecom Asia Pacific Ltd.	15,000	€ 41.09	December 19, 2011
Jean-Charles Andreani*	Managing Director—Asia-Pacific Region	13,750	€ 34.66	June 29, 2011
Claire Oliver*	Director of Quality Assurance	13,313	€ 34.66	June 29, 2011
Kye Cheung	Marketing Director, Wavecom, Inc.	12,000	€ 41.09	December 19, 2011
Lionel Bocharberg	General Counsel	10,000	€ 34.66	June 29, 2011

* Included in the group "executive officers and senior employees".

During 2001, the following ten employees exercised the largest number of stock options or founders' warrants:

Name	Number of stock options or	Exercise price per
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