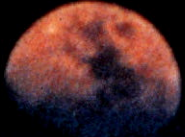


ci

Annual Report 1990



C



CORPORATE PROFILE

Spar Aerospace Limited is a Canadian shareholder-owned company engaged in the design, development, manufacture and servicing of systems for the space, robotics, communications, remote sensing, electro-optics and aviation markets. The company employs over 2,500 people, including approximately 1,000 engineers and technicians – one of the largest technological groups in the private sector in Canada.

Since its inception in 1967, Spar has gained international recognition as an advanced technology company. Approximately 50% of Spar's sales are in international markets. Spar devotes approximately 50% of its engineering activities to research and development, including cooperative programs with several Canadian universities.

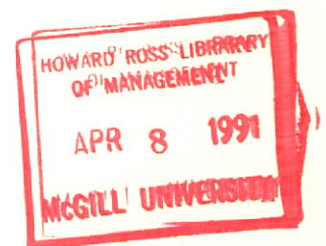


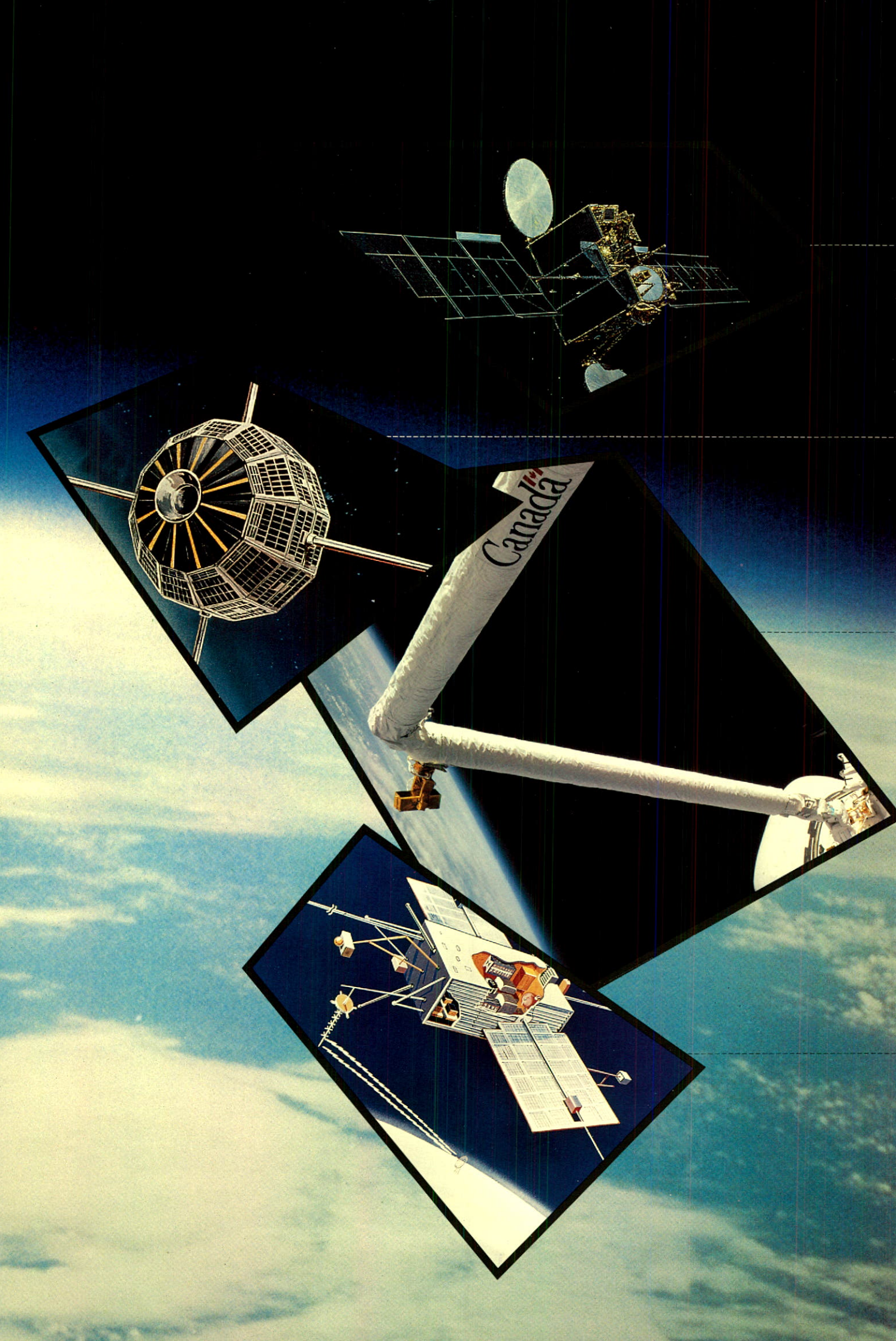
The financial section of this report
is printed on recycled paper.

Chairman's Remarks	Page 3
President's Remarks	Page 4
Spar Overview	Page 6
Management's Discussion and Analysis	Page 12
Financial Statements	Page 17
Corporate Information	Page 32

BUSINESS HIGHLIGHTS

- **January 1990** – awarded contract from Transport Canada for advanced satellite communications system for air traffic control in eastern Canada.
- **January 1990** – \$146 million contract signed with Canadian Space Agency for Phase One of Radarsat – remote sensing/earth resources satellite.
- **February 1990** – construction begins on innovative earth station for satellite communications system for the West African State of the Republic of Sierra Leone.
- **March 1990** – awarded contract to build three advanced satellite communications networks for Mexico. Project will develop one of the largest digital telecommunications networks in the world.
- **April 1990** – first contract for Spar FLIR technology in international marketplace with contract for 'Tiger Eye' thermal observation device to South Korea.
- **August 1990** – new breakthrough in Japanese market, Spar to provide engineering support to Toshiba for Japan's contribution to Space Station Freedom. Based on Spar's Canadarm robotic technology.
- **December 1990** – first competitive contract for the new Applied Systems Group with award from McDonnell Douglas to develop a deployable flight incident recorder system for F/A-18 aircraft.
- **December 1990** – Spar delivers second AN/SAR 8 Infra-red Search and Target Designation system to the US Navy. The second unit will undergo sea trials.
- **December 1990** – Spar and partner Hughes Aircraft Company awarded contracts for the world's most advanced and most powerful satellites for commercial mobile communications (MSAT).





CHAIRMAN'S REMARKS

Anik E, the world's most powerful domestic communications satellite.

Your Board is pleased to report much improved results for 1990. The restructuring initiated during 1989 and continued throughout 1990 has positioned Spar to take advantage of future opportunities.

Alouette, launched in 1962, opened the way for Canada's entry into space.

As we look forward to a bright future, we also look back to Spar's inception almost 25 years ago in the summer of 1967 when Canada's space industry was in its infancy. The budding frontier of space held many opportunities for those bold enough to seize them. A few young space engineers with deHavilland Aircraft of Canada Limited, had been engaged on the very successful Alouette and Isis research satellites. DeHavilland decided to concentrate in the field of aircraft, and an opportunity arose to acquire these engineers, together with some supporting high technology activities. Thus, Spar was born on January 1, 1968.

Canadarm, Spar's renowned contribution to manned space flight.

During the initial years, our space work was primarily electro-mechanical. From this grew the Canadarm and today's activities on Space Station Freedom.

In the mid 1970's, Spar moved into space electronics through the acquisition of the Canadian space operations of RCA Limited and Northern Telecom. Today, Spar's electro-mechanical and electronic skills are melded in the Space Station, Radarsat and MSAT programs. Over the years, Spar has dedicated an ever-increasing effort to developing electro-optical sensors for use in space and on earth.

Spar's sales have grown from \$5 million to well over \$300 million, and are still growing. Employment has increased from 280 to over 2,500 people.

We began operations in a World War II facility. Today, Spar operates from ten modern facilities in Canada and the United States. As well, Spar leads a dynamic team of high technology companies from coast to coast in Canada. This outstanding team provides the technical breadth that has enabled Spar, and Canada, to undertake projects of a scope and magnitude undreamed of in 1968.

STEM, the first development that launched Spar into space technology.

The vision we had in 1967 has been realized by the events of the past 23 years. Spar is greatly indebted to its dedicated employees, its customers, its team of Canadian associates, and to government leaders who have had the courage and the tenacity to work with us over the years.



LARRY D. CLARKE
CHAIRMAN OF THE BOARD

PRESIDENT'S REMARKS

Revenues for the year ended December 31, 1990 reached record levels of \$336 million. Net income of \$2.7 million marked a clear turnaround from 1989, and was essentially in accordance with our plan. Actions initiated in 1989 to focus and simplify the business were instrumental in the achievement of these results.

1990 was an exciting year. Your management team overcame numerous challenges in a way that confirms my belief in a bright future for Spar. The first Anik E has now been delivered. The Radarsat program, Spar's first major entry into the new market of remotely sensing the earth's environment and its resources, is well under way. Spar, with Hughes Aircraft, will build North America's first Mobile Communications satellites. MSAT marks an important transition in the future market for satellite communications technology and service. The Spar-led Canadian team continued preliminary design of the world's most advanced robotics systems for Space Station Freedom. The second AN/SAR-8 unit was delivered on time to the U.S. Navy for sea trials, and initial orders were booked for the revitalized CH46 helicopter main transmission. It was a year of accomplishment in Spar's traditional areas of activity. The acquisition of the assets of Leigh Instruments was a major step in the plan to increase the software intensity in the company's offerings.

Our biggest challenge during 1990 was to stabilize Spar's operating performance. I am pleased to report significant progress across the company in this regard. Effective control of operations has now been demonstrated by a return to profitability and by improved performance in the on-time delivery of work. It is particularly gratifying that Spar enters 1991 with its highest ever backlog of work under contract.

A high priority was placed throughout 1990 on simplifying the organizational structure to create a smaller executive and fewer but larger and more viable business groupings. The company has been restructured into five operating groups. The heads of these



groups are each accountable for a major, defined segment of Spar.

In addition to their individual responsibilities, the group heads share accountability with me and the corporate staff in developing the strategies for the future. Through emphasis on unity of purpose and integration of effort, this top management team is dedicated to creating the conditions that will focus our energy and will on improved performance and, the delivery of excellence in everything we do.

During the year, I spoke, in small groups, with every Spar employee. The enthusiasm and commitment I felt in each of them was the high point of my year and is a foundation for the confidence I have in the future.

1991 should see a continuation of the improvements evidenced in 1990. The three major space projects, Space Station, Radarsat and MSAT, will propel us to new heights of achievement, both in terms of exciting technologies and financial performance.

While ensuring that our efforts in the near term are dedicated to prudent management in turbulent times, we will strive to bring the future a little closer day by day.

Our employees, our cross Canada team of associates and suppliers, our shareholders, Canada's policy makers and the youth of our country, all have a stake in Spar's future. I thank them all for their continued support in helping to make the future a reality.

Spar's management team, (l to r), Bryan Held, VP, Finance and Administration, Ron McCullough, VP, Corporate Planning and Affairs, Ken Perry, VP and GM, Satellite and Communications Systems Division, Charles Dannemann, President, Advanced Technology Systems Group, John MacNaughton, President and Chief Executive Officer, Anthony Anderson, Executive Vice President, and William Fitzgerald, President, Satellite and Communications Systems Group.

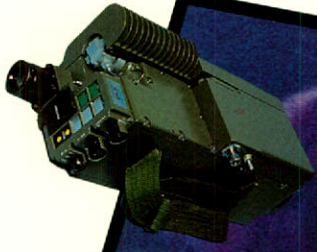


JOHN D. MACNAUGHTON

PRESIDENT AND CHIEF EXECUTIVE OFFICER

"At Spar – we dare to reach beyond tomorrow."

We will lead Canada's industrial pursuit of mankind's quest into space."



APPLIED SYSTEMS GROUP

At the leading edge of communications, navigation and night vision technologies for land, air and sea applications.



ADVANCED TECHNOLOGY SYSTEMS GROUP

Leading the world in space robotics and applying its technologies to advanced space and terrestrial robotic, electro-optic sensing and mechanism markets.



AVIATION GROUP

Supplying and maintaining the highest precision components for aircraft engine, transmission, electrical power and avionics applications in domestic and international markets.



SATELLITE AND COMMUNICATIONS SYSTEMS GROUP

Designing and developing the latest in commercial space based communications and earth sensing systems and hardware for Canada and international markets.

ADVANCED TECHNOLOGY SYSTEMS GROUP

Spar's leading position in advanced robotics was expanded during 1990. The design of the Mobile Servicing System, being produced for the Canadian Space Agency as Canada's contribution to the International Space Station Freedom, has proceeded as planned both at Spar and with its team of subcontractors and suppliers across Canada. Recognizing Spar's two decades of unique space robotics experience, Toshiba (Japan) awarded Spar a contract to provide engineering support for the Japanese Experiment Module Remote Manipulator System as part of Japan's contribution to Space Station Freedom.

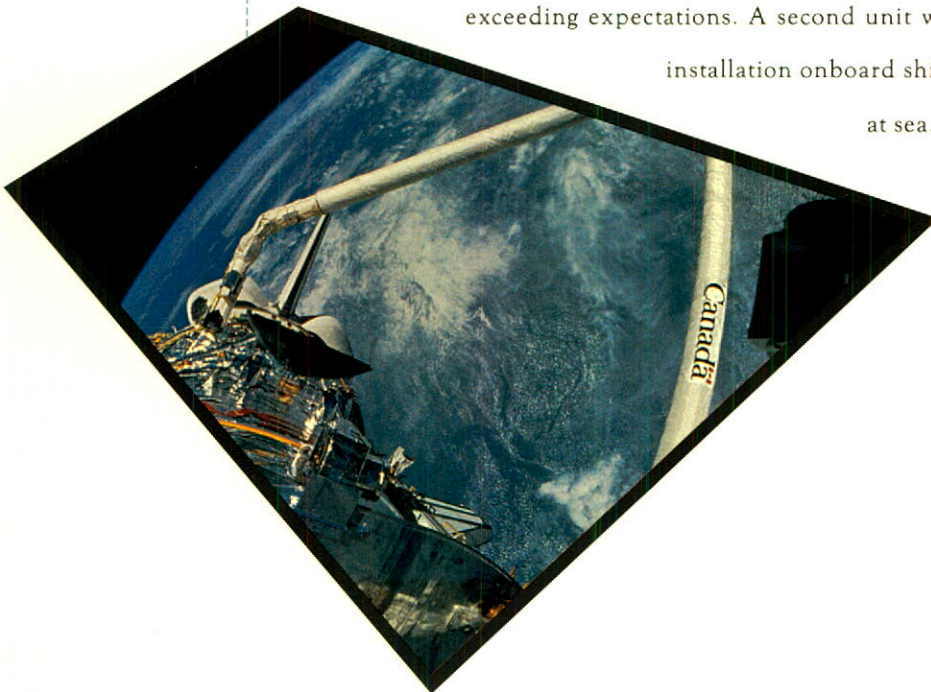
Terrestrial applications of space technology continued in 1990 with robotics contracts in support of North American and European development of safe and clean fusion energy. Work has also begun on applying this technology to the handling of radioactive materials to reduce human exposure and to accelerate clean up of these materials.

The success of the Spar solar array on the Olympus communications satellite was followed in 1990 by the award of the contract for the solar arrays for Canada's radar remote sensing spacecraft, Radarsat, as well as by continued work on space hardware for customers around the world, such as NASA.

AN/SAR-8, the Infra-red Search and Target Designation System being developed for the U.S. and Canadian navies, completed its first year of customer tests, meeting or exceeding expectations. A second unit was delivered at year end for installation onboard ship for the next phase of trials

at sea.

"Leading the world in space robotics and applying its technologies to advanced space and terrestrial robotic, electro-optic sensing and mechanism markets on projects ranging from the Canadarm and Space Station Freedom to the solar arrays for Radarsat."

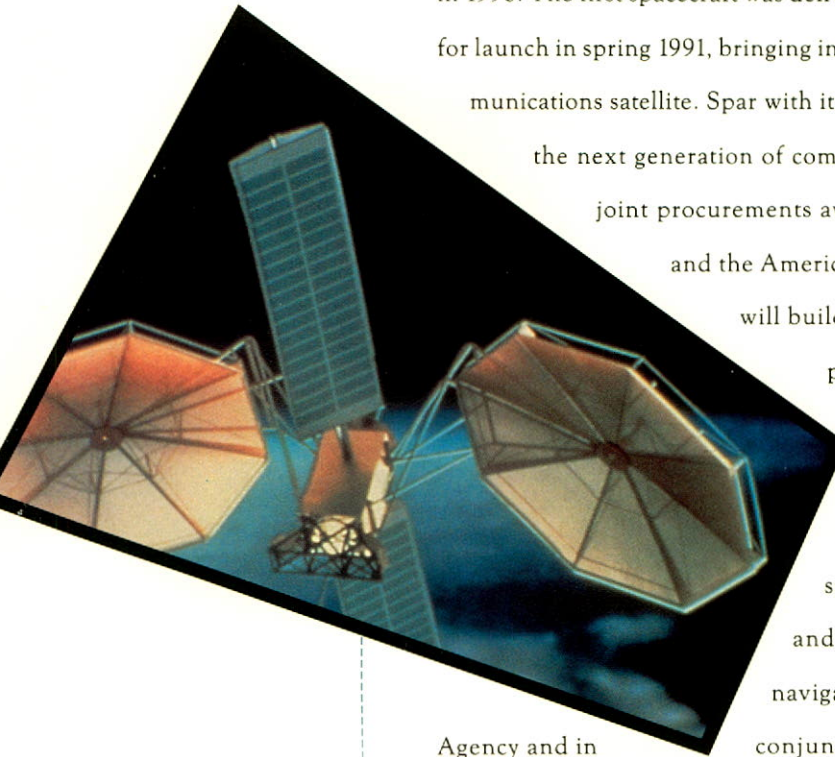


Work on the Anik E communications satellites for Telesat Canada was largely completed in 1990. The first spacecraft was delivered to the Arianespace complex in French Guiana for launch in spring 1991, bringing into service the world's most powerful domestic communications satellite. Spar with its partner Hughes Aircraft Company are pioneering the next generation of communications via satellite on the MSAT program. In joint procurements awarded in December 1990, by Telesat Mobile Inc. and the American Mobile Satellite Corporation, Spar and Hughes will build two satellites which will give instant mobile telephone access to every corner of North America.

Since its award in January, the Radarsat program has placed Spar and its Canadian team firmly in world markets for images provided from space to be used for environmental monitoring, crop and resource management, mineral exploration and navigation. Under the direction of the Canadian Space Agency and in conjunction with Radarsat International, Radarsat will take Spar, its team members and Canada to the frontiers of the commercial exploitation of space for earth resource applications.

Satellite telecommunications networks, built on the success of COMTEL systems in international markets, continue to be a focus for the group. Contracts to develop four large communications networks for Mexico are underway. Spar is also building antennas for Spain's HISPASAT and the French Telecom II satellites. Discussions continue regarding a joint venture with the Soviet Government where Spar could act as Prime Contractor for CanCom Inc. on the SovCan Star satellite project. The work on MSAT, Radarsat and an international set of programs in space, combined with continued expansion of the telecommunications network business, is providing record levels of activity for the group.

"Designing and developing the latest in commercial space based communications and earth sensing systems and hardware for Canada and international markets with activities ranging from the prime contracts for the Anik, Radarsat and MSAT satellites to the supply of the most advanced satellite components like antennas to other major space contractors such as Hughes, Matra and TRW."



APPLIED SYSTEMS GROUP

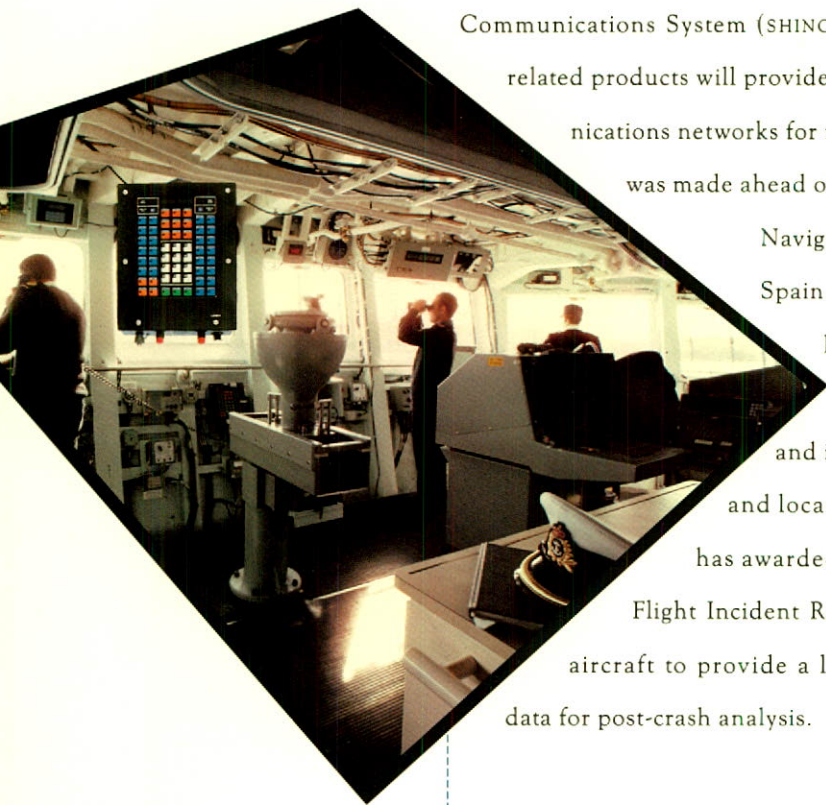
The Applied Systems Group was formed from the combination of Spar's operations in the Ottawa Valley and the assets of Leigh Instruments acquired in October 1990. The group now has 400 employees and a full order book for the next two years.

Spar made significant progress during the year in completing the development of the "Tiger Eye" long range night observation device (NODLR) for the Canadian Forces and for the Korean Army. The first deliveries of NODLR were made in January 1991 and production will continue through this year. Significant follow-on orders are being pursued. Initial production was completed on the ADATS™ electro-optical sensor for the Canadian Forces Low Level Air Defence System and further orders await completion of tests by Martin Marietta of the U.S. Army's Forward Area Air Defense System.

The acquisition of Leigh assets brought significant programs in air and shipborne communications and navigation to Spar. The Shipboard Integrated Interior Communications System (SHINCOM) for the Canadian Patrol Frigate Program and related products will provide the world's most advanced digital switched communications networks for naval operations. The first SHINCOM delivery by Spar was made ahead of schedule in late 1990.

Navigation beacons for aircraft (TACAN) were delivered to Spain. The market for TACAN products on land and on ships has significant growth potential for the company.

Spar continues to build its aircraft avionics and instruments business particularly for crash recorders and locator beacons. The McDonnell Douglas Corporation has awarded Spar the development contract for a Deployable Flight Incident Recorder (DFIRS) which detaches itself from disabled aircraft to provide a locator beacon for faster rescue and records vital data for post-crash analysis.



"At the leading edge of communications, navigation and night vision technologies for land, air and sea applications."

AVIATION GROUP

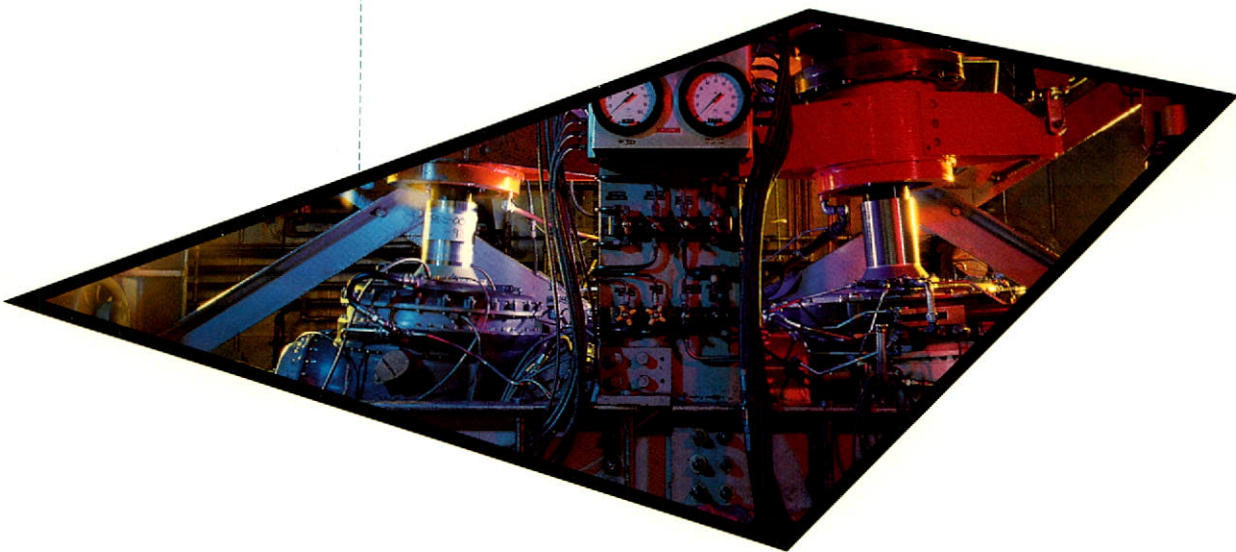
Spar continued as a world leader in the production of high precision gears and transmissions for aircraft engine and power train applications on programs such as the T700/CT7 and CFM-56 for General Electric and the Blackhawk helicopter for Sikorsky.

Spar is an industry leader in applying new team-based, employee-directed approaches to increasing productivity and product effectiveness.

From its new, purpose designed facility, Spar's aviation repair and overhaul business continues to increase its responsiveness to its customers by reducing time for repairs and ensuring the maximum life before the next repair cycle, while maintaining Spar's reputation for the highest quality.

In addition to its traditional domestic and international customer base, Spar has been successful in selling its services to new European and NATO customers, a market which has significant long term growth potential.

"Supplying and maintaining the highest precision components for aircraft engine, transmission, electrical power and avionics applications in domestic and international markets."



The discussion and analysis that follows comments on factors which caused changes in the company's results of operations during the two year period ended December 31, 1990 and its financial position at that date as presented in the accompanying financial statements. Operating results

of the company's business segments as reported under "Industry segment information" (note 14, page 29 of this Annual Report) are commented upon, as well as other factors related to the company's business.

RESULTS OF OPERATIONS

Revenues at \$336 million, the highest in the company's history, were 44% higher than 1989. The Systems segment contributed 93% of the increase in total revenues. The increase in revenues results primarily from higher levels of activity related to the Radarsat and Space Station Freedom programs under contracts with the Canadian Government and a 58% increase to \$30 million of revenue from United States subsidiaries.

Gross margin as a percent of total revenue was 20.3% in 1990 and 21.0% in 1989. In 1989, margin percentages were impacted by higher costs in the Systems segment caused by a combination of program cost overruns and underrecovery of fixed costs due to program delays. The percentage margin level in 1990 is in part a reflection of these lower 1989 margins on contracts continuing into 1990 and a heavier weighting of cost reimbursable contract activity compared to 1989 in the Systems segment.

Gross Margin dollars increased \$19.2 million to \$68.1 million. This represented a 39% increase in margin dollars compared to the 44% increase in revenue.

Administrative and selling expenses were 20.2% higher than 1989. These costs represent 12.4% of revenues down from 14.8% in the prior year. Inflation accounted for approximately one half of the \$7 million increase with the remainder largely the result of increased staffing within the Systems segment to support the substantial increase in program activity.

Research and development costs increased \$.8 million over 1989 levels with the major emphasis continuing to be directed to advanced technologies and manufacturing processes used in communications and remote sensing. Reported costs represent company funded expenditures net of government assistance (see note 11, page 28) and do not include customer funded development which is included in revenues and cost of revenues.

Depreciation and amortization costs decreased \$1.3 million. An accelerated write-off of \$2.4 million of special purpose test equipment was included in 1989. Adjusting for this, depreciation and amortization increased \$1.1 million,

the result of continued high levels of fixed asset investment. Capital investments in the Systems and Aviation segments in 1990 were \$19 million and \$6 million respectively. Approximately \$9 million of assets were purchased in the last quarter of 1990 including those purchased from the Estate of Leigh Instruments Limited and therefore, their proportionate period depreciation had less impact on 1990 depreciation expense.

Interest and other expenses, net increased \$.8 million from 1989. Losses on equity earnings from the company's investments combined with marginally higher borrowing volume and cost contributed to the increase.

The factors described above contributed to a \$12.0 million increase in **Income before unusual items and income taxes**.

1989 Unusual Items — the net loss before income taxes and extraordinary item in 1989 includes an \$11.6 million provision for unusual items. A program of organizational reviews initiated in 1989, resulted in an \$8.6 million provision to rationalize Spar's organization and certain operations, focus the business and improve productivity. These actions were taken to stabilize operating performance and lay the groundwork for a return to profitability. It was also necessary to provide \$1.5 million to implement environmental improvements outside the Caledonia Road plant in Toronto. The company also recorded a one-time charge of \$1.5 million to relocate the Aviation Services Division to a new facility adjacent to Pearson International Airport.

The 1989 extraordinary item — income tax recovery of \$2.6 million in 1989 results from the recognition of prior years' losses of U.S. subsidiaries, and reduced the net loss for 1989 to \$9.2 million. The U.S. tax losses were fully utilized in 1989.

The **Net income** for 1990 at \$2.7 million represents an \$11.9 million net improvement over the net loss reported for 1989. This increase represents primarily higher volume and the absence of unusual items recorded in 1989.

LIQUIDITY AND CAPITAL RESOURCES

The company's **cash indebtedness** at the end of 1990 was \$14.5 million, a decrease of \$3.9 million from the prior year end. The decrease in bank borrowings results mainly from improved cash flow from operating activities.

Accounts receivable at the end of 1990 are \$5.9 million lower than the level of the previous year. Collection performance by both the Systems and Aviation segments contributed to this significant improvement considering the higher 1990 revenue.

Inventories at year end 1990 are \$4.3 million higher than the end of 1989. Inventory increases in the Systems segment of approximately \$8 million as the result of the increased program activity were partially offset by lower year end inventories in the Aviation segment.

The net book value of **fixed assets** increased \$14.7 million over values at the end of 1989 primarily as a result of continuing heavy capital expenditures in 1990. Capital expenditures totalling \$27 million in 1990 concentrated on improving development, manufacture and test capabilities including the construction of a new antenna test facility in Montreal and the addition of significant computing support to enhance productivity.

Deferred development costs have decreased by \$1.3 million in the year. In 1990 no development costs were deferred and \$1.3 million of FLIR development costs were amortized. Costs of \$1.8 million associated with the AN/SAR-8 program were deferred during 1989 while \$1.2 million related to FLIR (Forward Looking Infra-red) development was amortized in the same period.

Working capital at the end of 1990 of \$7.1 million is down \$7.9 million from the prior year. Reduction of working capital is due to financing of capital spending from working capital.

Liquidity discussion — the company has over the last several years financed its fixed asset, deferred development and working capital investments out of operating cash flow, employee stock issues and short-term bank borrowing, while maintaining minimal long-term debt. The nature of the company's contracting is such that programs are largely financed by customer progress payments based on costs incurred or on achieved milestones over the period of the project. The quality of the government and commercial customer base is such that the credit risk to the company is low. These factors allow the company to operate on lower working capital levels relative to the volume of revenues than many other businesses. Temporary increases in the levels of receivables or inventories, when experienced due to delayed receipts or milestones not being achieved on programs, may be financed by short-term bank borrowings.

Dividends paid in 1990 were 12 cents per share compared to 25 cents in 1989. The latest quarterly dividend declared in November 1990 and payable in January 1991, was at a rate of 3 cents per share.

The company has arrangements with its bankers for credit facilities to supplement periodic operating cash flow requirements. At December 31, 1990, approximately 20% of available credit facilities with various banks was used.

BUSINESS SEGMENTS

(reference note 14, page 29 of Annual Report)

Systems Segment

(\$ millions)

	1990	%	1989	%
Satellite and ground communication systems	\$134.0	47.0	\$ 85.2	45.0
Space robotic systems	114.0	40.0	57.8	30.5
Electro-optical sensing systems	37.3	13.0	46.5	24.5
Total Segment Revenue	\$285.3	100.0	\$189.5	100.0
Operating income	\$ 19.1	6.7	\$ 5.0	2.6
Assets	156.0		147.6	
Capital expenditures	18.8		7.4	
Deferred development expenditures	—		1.8	
Depreciation and amortization	10.6		12.1	

Systems segment revenues rose significantly to exceed 1988 revenue of \$228 million with an increase of \$95.8 million, up 51% over 1989. Higher activity levels on the Radarsat satellite and the Space Station Freedom contracts were the major contributors to increases in the satellite and space systems classifications respectively. These increases were partially offset by lower revenues in the electro-optical product

classification as the AN/SAR-8 development contract moved to completion.

Systems segment operating income recovered from the depressed level of 1989 with an increase of \$14.1 million. Higher volume and improved profit margins were major contributors to the improvement.

Cost overruns on electro-optics (FLIR) contracts had a negative impact on operating income.

Aviation Segment

(\$ millions)	1990	%	1989	%
Gears and transmissions	\$34.0	63.8	\$27.6	57.0
Repair and overhaul	19.3	36.2	20.8	43.0
Total Segment Revenue	\$53.3	100.0	\$48.4	100.0
Operating income	\$ 2.9	5.4	\$ 1.9	3.9
Assets	42.6		34.0	
Capital expenditures	6.1		3.1	
Depreciation and amortization	2.2		1.9	

Aviation segment revenues increased \$4.9 million mainly due to higher gear and transmission sales to United States aircraft engine manufacturers.

Improved profit margins were largely the

result of increased volume, complemented by manufacturing efficiencies achieved from capital equipment and cell manufacturing technology introduced in 1989 and 1990.

OTHER DISCUSSION AND COMMENT

Planned Canadian Space Agency Budget

On December 14, 1990, the Minister of Industry, Science and Technology formally proclaimed into law the legislation creating the Canadian Space Agency. As reported in the federal govern-

ment's main estimates, the planned budget for the Agency and sponsored programs for 1989 – 2001 is \$2.4 billion. Estimated allocation of the funding is as follows:

(\$ billions)		
Space Station Freedom Program	49%	\$1.2
Radarsat Program	18%	.4
Space Sciences	12%	.3
European Space Agency Program	7%	.2
Other	14%	.3
	100%	\$2.4

The Canadian Government's strong endorsement is directed to ensuring that Canada maintains its forefront role in the peaceful development and use of space and the development of

Canadian contractors.

Spar is the prime Canadian contractor on both the Space Station Freedom and Radarsat programs.

Backlog of unrecognized revenue on uncompleted contracts as at December 31, 1990 with

comparative figures for 1989 was as follows:

(\$ millions)	1990	%	1989	%
Systems segment	\$464.7	88.4	\$190.0	71.3
Aviation segment	60.7	11.6	76.3	28.7
	\$525.4	100.0	\$266.3	100.0

In 1990, \$603 million of orders were received, 93% of which were in the Systems segment. The major awards in 1990 include Phase One Radarsat contract — \$146 million, Phase C2B of the Space Station Freedom program — \$195 million, and the Mobile Satellite (MSAT) contract — \$125 million.

Market outlook for the Systems segment is viewed optimistically by management in both domestic and international spheres. Government funding constraints, both domestic and in the United States, may delay projected year by year funding of programs, however, these constraints if they should occur, are anticipated to be of a short-term duration.

The International Space Station Freedom program has been reviewed in detail by NASA resulting in a revised program which reconfigures the Space Station program to spread activities over a longer period. The Canadian robotic contribution is still vital to the program, and any impact of program extension which might affect Spar is expected to be modest.

Customer response to the test results of AN/SAR-8 has been enthusiastic. Considerable work remains to be done with the customer to take the system through the final phases of test and the completion of operational requirements prior to the first production orders.

The addition of Leigh Instruments assets to the segment has opened new markets in naval and airborne communications and navigation software intensive equipment which should be growth areas as newer ships and aircraft come into service and older ones are refitted during planned modernization programs.

The current market outlook for the aviation segment is less optimistic. The high level of the Canadian dollar weakens the competitive position of the segment's gears and transmissions products with its predominant United States customer base. Competitiveness is further eroded by underutilized capacity of North American gear manufacturers and the segment's relatively high labour rates compared to several of the United States based competitors.

Estimates used in Revenue and Margin Recognition — as referred to in the Summary of Accounting Policies, note 1 (a), page 23, the company recognizes revenue and margin on projects largely using the percentage of completion method. This method relies on regularly prepared estimates of the costs required to complete the project. The nature of much of the work is such

that estimates cannot be precise and are regularly revised based on past and anticipated experience in performance of the work.

Should cost estimates to complete the work increase beyond the original estimated cost level (including allowances for estimating contingencies) the impact on operating results is dependent on the nature of the contract, as outlined below:

Cost Reimbursable Contract with Fixed Fee — Cost overruns are reimbursed by the customer, revenues and costs are higher than expected and, although the fee as a percentage of revenue drops, the actual dollar fee remains fixed. There is normally little financial risk assumed by the company but statistical performance (percentage return on revenue) will deteriorate if an overrun is significant.

Fixed Price Contracts — Cost overruns (not caused or contributed to by the customer) are not reimbursed and must be absorbed by the company. Cost overruns impact margins dollar for dollar and, even when modest relative to a similar overrun on a cost reimbursable contract, drastically affect both income and returns measured as a percentage of revenue.

Some cost reimbursable and fixed price contracts contain incentive clauses which may result in fee enhancement or deterioration relative to performance targets.

In 1990, cost reimbursable contracts accounted for approximately 60% of revenue, mainly in the Systems segment compared to 40% in 1989.

Exchange Rate Fluctuations — Normally the company's revenues are contracted in Canadian or U.S. dollars and the bulk of costs are in the same currencies. The company follows a policy of not speculating on exchange rates. It endeavours to minimize net foreign currency exposures in contracts by negotiating clauses that provide for price adjustment resulting from significant exchange rate changes and/or enters into exchange futures contracts designed to protect margins anticipated at the time of contract award, as summarized on note 1 (g), page 23. The potential for significant losses or gains as a result of exchange rate variations is reduced by these methods as well as by the relatively high mix of cost reimbursable business.

The current high level of the Canadian dollar to the U.S. dollar detracts from the company's competitive position in the U.S. markets.

Inflation Protection – Economic inflation factors are estimated and applied to costs in the contract bidding stage. In the case of cost reimbursable contracts, actual costs are reimbursed regardless of the actual inflation rate. In the case of fixed price contracts, if the actual inflation rate is higher than that used in the bidding process, profits deteriorate relative to those originally anticipated and, conversely, profits improve if the actual rate of inflation is lower than that used in the bidding stage. Longer duration unit delivery prices may also include provision for “economic price adjustment”, dependent on various published cost indices, to provide inflation protection.

Considering current rates of inflation in North America, management is of the opinion that inflation does not pose a serious risk to its competitiveness in either its markets or operations.

Penalties and Incentives – Some contracts contain incentive and/or penalty provisions which may vary but usually include incentives for performance beyond specified acceptable levels and/or penalties for late delivery or performance below specified levels. Such penalty provisions are normal to the company’s business. The company has historically been able to avoid significant penalty impacts. However, future penalties potentially could have a material impact, particularly where the company’s role is that of prime contractor and it is unable to negotiate relief with its customer or obtain relief from any of its subcontractors whose performance may have contributed to the cause.

The company may endeavour to obtain insurance to cover penalty or incentive risk associated with major contracts based on the degree of risk, availability and cost of coverage.

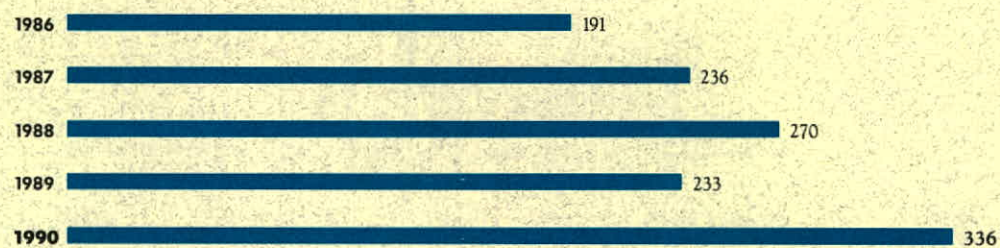
Other Issues – The company’s largest current programs, which have been approved, are for Government agencies. Such programs generally run for longer than three years.

The skilled technical staff required by the company for its 1991 operations is largely in place. Ongoing contract negotiations with a large engineering and professional association within the company have entered the mediation stage towards reaching an agreement. Successful conclusion of contract terms will allow management to focus on applying the relatively scarce specialized technical resources to medium and longer term business opportunities.

FINANCIAL HIGHLIGHTS

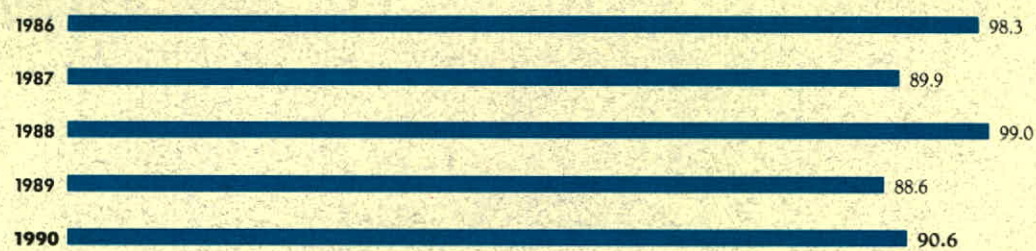
REVENUES

(\$ millions)



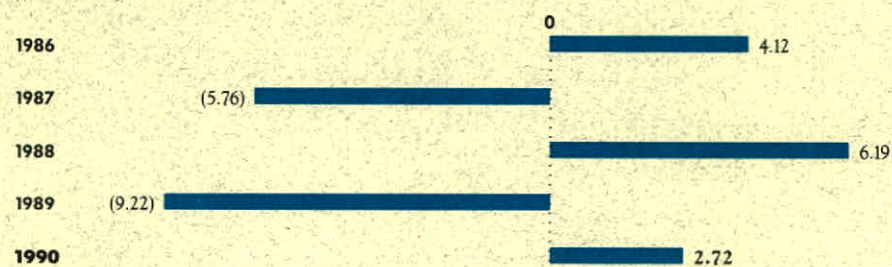
SHAREHOLDERS' EQUITY

(\$ millions)



NET INCOME

(\$ millions)



MANAGEMENT REPORT ON RESPONSIBILITY FOR FINANCIAL REPORTING

The management of Spar Aerospace Limited and its subsidiaries is responsible for preparing the accompanying financial statements and for their integrity and objectivity. The statements were prepared in accordance with generally accepted accounting principles applied on a consistent basis and are to the best of our knowledge and belief fairly stated. The financial statements include amounts that are based on management's best estimates and judgements. Management prepared all the information in the annual report and is responsible for its accuracy and consistency with the financial statements.

Management maintains a system of internal control that provides reasonable assurance as to the integrity and reliability of the financial statements, the protection of assets from unauthorized use or disposition, and the prevention and detection of fraudulent financial reporting. The system of internal control provides for appropriate division of responsibility and is documented by written policies and procedures that are communicated to employees who have a significant role in the financial reporting process. Management has established procedures to monitor the activities of the company to ensure compliance with the system of internal control.

The company has an Audit Committee of the Board of Directors. At the request of the Committee, management attends its meetings to review matters relating to the financial reporting process.

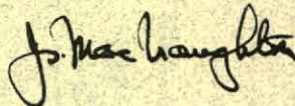
The accompanying consolidated financial statements have been audited by Ernst & Young, who were appointed as the company's external auditors by the shareholders at the last annual

meeting. Management has made available to the external auditors all financial records and related data. Furthermore, management believes that all representations made to the external auditors during their audit were valid.

Spar maintains an internal audit program that independently assesses the effectiveness of internal controls and recommends improvements. In addition, as part of the audit of Spar's financial statements, the external auditors review the company's internal controls to establish a basis for determining the nature, timing, and extent of audit tests to be applied. Management has considered the internal and external auditors' recommendations concerning the system of internal control and has taken actions which it believes are cost-effective to respond appropriately to these recommendations. Management believes that as of December 31, 1990, the company's system of internal control was adequate to accomplish these objectives.

Management also recognizes its responsibility for ensuring that Spar's business is conducted with integrity. This responsibility is reflected in the Spar business conduct policy to which designated employees are required to make a commitment.

The business conduct policy addresses relationships with customers, suppliers and competitors; potential conflicts of interest; compliance with the law and confidentiality of company information. Management reviews this policy with all Spar employees annually and has procedures in place to assess compliance with the policy.



JOHN D. MACNAUGHTON
PRESIDENT AND
CHIEF EXECUTIVE OFFICER



ANTHONY L. ANDERSON
CHIEF FINANCIAL OFFICER
AND EXECUTIVE VICE PRESIDENT

March 6, 1991

AUDIT COMMITTEE REPORT

The Audit Committee of the Board of Directors is composed of a minimum of three and a maximum of five directors who are not officers or employees of the company. The Committee meets quarterly to oversee, on behalf of the Board of Directors, the company's financial reporting process.

In fulfilling its responsibilities during the past year, the Committee:

- Reviewed the overall scope and plans for audits by the internal and external auditors;
- Reviewed the actions taken by management with respect to the recommendations made by the internal and external auditors;



E.H. ORSER
AUDIT COMMITTEE CHAIRMAN

March 6, 1991

- Met with the external auditors, without management present, to discuss the results of their audit, their evaluation of the company's internal controls, and the overall quality of the company's financial reporting and internal audit process;
- Reviewed the accounting principles and policies adopted by the company and discussed the interim and annual financial statements issued by the company to its shareholders;
- Recommended to the Board of Directors the reappointment of Ernst & Young as the company's external auditors.

AUDITORS' REPORT

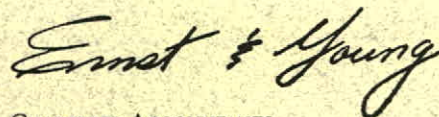
To the Shareholders of Spar Aerospace Limited:

We have audited the consolidated balance sheets of Spar Aerospace Limited as at December 31, 1990 and 1989 and the consolidated statements of income, retained earnings and cash flow for the years then ended. These financial statements are the responsibility of the company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstate-

ment. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these consolidated financial statements present fairly, in all material respects, the financial position of the company as at December 31, 1990 and 1989 and the results of its operations and the changes in its financial position for the years then ended in accordance with generally accepted accounting principles.



CHARTERED ACCOUNTANTS

MISSISSAUGA, CANADA

February 8, 1991

CONSOLIDATED STATEMENTS OF INCOME*For the years ended December 31, 1990 and 1989*

(\$000s)	1990	1989
Revenues	\$335,691	\$233,163
Cost of revenues including all expenses except items shown below (note 7)	267,590	184,279
Gross margin, before depreciation	68,101	48,884
Administrative and selling expenses	41,599	34,604
Research and development costs (notes 7 and 11)	4,821	4,042
Depreciation and amortization	13,121	14,448
Interest and other expenses, net	3,695	2,938
	63,236	56,032
Income (loss) before the undernoted items	4,865	(7,148)
Unusual items (note 13)	—	(11,600)
Income (loss) before income taxes and extraordinary item	4,865	(18,748)
Income tax (expense) recovery (note 7)	(2,150)	6,930
Income (loss) before extraordinary item	2,715	(11,818)
Extraordinary item — income tax recovery (note 7)	—	2,600
Net income (loss)	\$ 2,715	\$ (9,218)
Earnings (loss) per subordinate voting share (in dollars)		
Income (loss) before extraordinary item	\$ 0.24	\$ (1.05)
Net income (loss) for the year	\$ 0.24	\$ (0.82)

CONSOLIDATED STATEMENTS OF RETAINED EARNINGS*For the years ended December 31, 1990 and 1989*

(\$000s)	1990	1989
Retained earnings, beginning of year	\$ 16,218	\$ 27,697
Net income (loss)	2,715	(9,218)
Dividends declared on subordinate voting shares	(1,364)	(2,261)
Retained earnings, end of year	\$ 17,569	\$ 16,218

(See accompanying notes to consolidated financial statements)

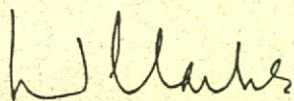
CONSOLIDATED BALANCE SHEETS

December 31, 1990 and 1989

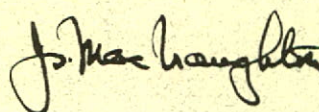
(\$000s)	1990	1989
Assets		
Current assets:		
Marketable securities (note 2)	\$ —	\$ 66,250
Accounts receivable	70,259	76,185
Inventories (note 3)	39,072	34,747
Prepaid expenses and other	2,218	1,923
<hr/>		
Total current assets	111,549	179,105
Accrued incentive revenue	16,654	17,027
Fixed assets (note 4)	51,820	37,129
Employee loans receivable (note 8)	1,845	2,320
Long term investments (note 5)	2,032	2,255
Deferred pension costs	12,110	12,667
Deferred development costs	6,150	7,412
<hr/>		
Total Assets	\$202,160	\$257,915
<hr/>		
Liabilities and Shareholders' Equity		
Current liabilities:		
Bank indebtedness	\$ 14,526	\$ 84,673
Accounts payable and accrued charges	81,665	64,212
Customer advance payments (note 3)	8,040	13,321
Current portion of long term debt (note 6)	30	186
Current deferred income taxes	145	1,716
<hr/>		
Total current liabilities	104,406	164,108
<hr/>		
Long term debt (note 6)	7,204	5,218
<hr/>		
Shareholders' equity		
Share capital (note 8)	72,981	72,371
Retained earnings	17,569	16,218
<hr/>		
Total shareholders' equity	90,550	88,589
<hr/>		
Total Liabilities and Shareholders' Equity	\$202,160	\$257,915

(See accompanying notes to consolidated financial statements)

On behalf of the Board:



DIRECTOR



DIRECTOR

Spar Aerospace Limited

CONSOLIDATED STATEMENTS OF CASH FLOW

For the years ended December 31, 1990 and 1989

(\$000s)	1990	1989
Operating activities		
Net income (loss) before extraordinary item	\$ 2,715	\$(11,818)
Items not affecting cash (note 12)	12,898	7,048
	<u>15,613</u>	<u>(4,770)</u>
Extraordinary item — income tax recovery	—	2,600
Net decrease (increase) in cash invested in working capital related to operations (note 12)	13,477	(649)
Net cash from (used in) operating activities	<u>29,090</u>	<u>(2,819)</u>
Financing activities		
Issue of subordinate voting shares	610	1,027
Employee loans receivable	475	1,255
Increase in long term debt	2,016	2,823
Long term debt repayments	(186)	(618)
Dividends paid	(1,363)	(2,824)
Net cash from financing activities	<u>1,552</u>	<u>1,663</u>
Investing activities		
Additions to fixed assets	(26,803)	(11,539)
Proceeds on disposition of fixed assets	253	375
Deferred development expenditures	—	(1,834)
Investments in associated companies	(195)	—
Net cash used in investing activities	<u>(26,745)</u>	<u>(12,998)</u>
Increase (decrease) in cash	3,897	(14,154)
Indebtedness, beginning of year	(18,423)	(4,269)
Indebtedness, end of year	<u>\$ (14,526)</u>	<u>\$ (18,423)</u>

Indebtedness consists of bank indebtedness less marketable securities.

(See accompanying notes to consolidated financial statements)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

December 31, 1990

1. SUMMARY OF ACCOUNTING POLICIES

The accompanying financial statements consolidate the accounts of the company and its subsidiaries and have been prepared by management in accordance with generally accepted accounting principles consistently applied within the framework of the accounting policies summarized below. Because a precise determination of many assets and liabilities depends on future events, the preparation of financial statements for a period necessarily involves the use of estimates and approximations.

(a) Revenue recognition

Revenue is accrued using the percentage of completion method as the work is performed and provision is made for the total anticipated loss when the estimate of total costs on a contract indicates a loss. As some contracts extend over one or more years, any revisions in cost and profit estimates made during the course of the work are reflected in the accounting period in which the need for the revision becomes known. Some contracts contain incentive and/or penalty provisions based on performance relative to established targets. Such awards or penalties are included in revenue or cost estimates when such amounts can reasonably be determined.

(b) Accrued incentive revenue

Accrued incentive revenue relates to satellite contracts and represents the non-current portion of the present value of cash payments that the company estimates it will receive, net of allowances for performance failures.

(c) Research and development costs

The company expenses all research and development expenditures, after deducting scientific research and development tax credits and government assistance, as incurred with the exception of certain development costs incurred prior to commencement of or during initial commercial production of new products, which are deferred.

Deferred development costs are amortized in proportion to projected revenue of related products commencing in the year of initial commercial production. Should the company determine that the unamortized balance of deferred costs is in excess of amounts that can reasonably be recovered from the benefits of future sales, such excess is written off at that time.

(d) Inventories

Inventories of raw materials and finished goods are valued at the lower of cost, on a moving

average basis, and market value, being replacement cost for raw materials and net realizable value for finished goods. Contracts in process are valued at estimated sales value calculated on the percentage of completion basis.

(e) Long term investments

Investments in companies where the company has the ability to exercise significant influence are accounted for by the equity method. Other long term investments are carried at cost.

(f) Fixed assets

Additions to fixed assets are recorded at cost after deducting investment tax credits and government assistance. Depreciation and amortization are provided on the straight-line method on a basis estimated to amortize the cost of the assets over their useful lives as follows:

Machinery and equipment	10% to 33-1/3%
Buildings	5%
Leasehold improvements	Term of the lease plus renewal option, if applicable

(g) Foreign exchange

Transactions in foreign currencies are translated into Canadian dollars at the approximate rate prevailing at the time of the transactions. Monetary assets and liabilities in foreign currencies are translated at rates prevailing at the year end. Non-monetary assets and liabilities, and related income statement charges, are translated at historical rates. Foreign exchange gains and losses are included in income for the year, except those which relate to long term monetary items which are deferred and amortized over the term of the related asset or liability.

(h) Pension costs and obligations

Current service costs under the company's pension plans are charged to operations as services are rendered, based on annual actuarial valuations calculated using the projected benefit method prorated on services and management's best estimate assumptions of the rate of return on pension plan assets, rate of salary increases and various other factors including mortality rates, terminations, and retirement ages. The valuation of pension fund assets is based on market-related values, which spread unrealized gains and losses over five years.

The excess of the value of pension fund assets over the actuarially-computed present value of accrued pension obligations as at January 1,

1987, and any adjustments to pension costs arising from plan amendments, experience gains and losses, and changes to assumptions since that date are amortized, on a diminishing balance basis, over the expected average remaining service lives of the employee groups covered by the plans.

(i) Income taxes

The company follows the practice of providing for income taxes based on income included in the financial statements regardless of when such income is subject to payment of taxes under the tax laws.

2. MARKETABLE SECURITIES

The company's marketable securities portfolio is carried at the lower of aggregate cost and market and consists of the following:

(\$000s)	1990		1989	
	Cost	Market	Cost	Market
Canadian government bonds	\$ -	\$ -	\$66,109	\$66,709
Corporate bonds and other	-	-	141	141
	<u>\$ -</u>	<u>\$ -</u>	<u>\$66,250</u>	<u>\$66,850</u>

3. INVENTORIES

Inventories consist of the following:

(\$000s)	1990	1989
Contract costs and related profit margins recognized to date	\$ 408,186	\$ 399,235
Less: related progress billings	374,605	370,587
	<u>33,581</u>	<u>28,648</u>
Raw materials, parts and supplies	5,130	5,520
Finished goods	361	579
	<u>\$ 39,072</u>	<u>\$ 34,747</u>

Customer advance payments in excess of contract costs and related profit margins of \$8,040,000

(1989 - \$13,321,000) are included in current liabilities.

4. FIXED ASSETS

Fixed assets consist of the following:

(\$000s)	1990	1989
Cost:		
Land	\$ 500	\$ 400
Buildings and leasehold improvements	17,828	10,157
Machinery and equipment	105,785	88,084
	<u>124,113</u>	<u>98,641</u>
Less: accumulated depreciation and amortization	72,293	61,512
	<u>\$ 51,820</u>	<u>\$ 37,129</u>

5. LONG TERM INVESTMENTS

(\$000s)	1990	1989
MacDonald, Dettwiler and Associates Ltd., at cost	\$ 2,032	\$ 2,032
Other equity investments	—	223
	<u>\$ 2,032</u>	<u>\$ 2,255</u>

6. LONG TERM DEBT

The company's long term debt consists of the following:

(\$000s)	1990	1989
Interest free loan repayable over 10 years starting in 1992	\$ 7,204	\$ 5,188
Term loans at 10.625%	30	197
Capital lease obligations bearing interest at 11.0%	—	19
	<u>7,234</u>	<u>5,404</u>
Less: amount included in current liabilities	30	186
	<u>\$ 7,204</u>	<u>\$ 5,218</u>

Long term debt is repayable as follows:

(\$000s)	Interest Free Loan	Term Loans and Other	Total
1991	\$	\$ 30	\$ 30
1992	100		100
1993	947		947
1994	1,090		1,090
1995	1,426		1,426
Future years	3,641		3,641
	<u>\$ 7,204</u>	<u>\$ 30</u>	<u>\$ 7,234</u>

7. INCOME TAXES

Research and development tax credits

Scientific research and development tax credits

earned have been applied to reduce the cost of the related expenditures as follows:

(\$000s)	1990	1989
Research and development costs	\$ 763	\$ 909
Cost of revenues	1,137	291
	<u>\$ 1,900</u>	<u>\$ 1,200</u>

Effective income tax rate

The company's income tax provision consists of the following:

(\$000s)	1990	1989
Combined basic Canadian and U.S. statutory income tax rates	40.9%	42.2%
Income tax (expense) recovery prior to the following:	\$ (1,990)	\$ 7,912
– Manufacturing and processing deduction	47	(875)
– Large Corporations Tax	(300)	(150)
– All other items, net	93	43
Income tax (expense) recovery	<u>\$ (2,150)</u>	<u>\$ 6,930</u>

Utilization of loss carry forwards — 1989 Extraordinary item

The extraordinary income tax recovery in 1989 recognizes prior years' losses of U.S. subsidiaries.

8. SHARE CAPITAL

A summary of changes to issued share capital for the years ended December 31, 1990 and 1989 is as follows:

(\$000s)	Subordinate voting		Special		Total
	Shares	\$	Shares	\$	\$
Issued and outstanding December 31, 1988	11,254,540	71,193	1,074,223	151	71,344
a) Issue of subordinate voting shares for cash under employee share purchase plan	60,664	992			992
b) Exercise of options for cash	10,630	35			35
c) Conversion of Special Shares to subordinate voting shares	104	1	(5,250)	(1)	—
Issued and outstanding December 31, 1989	11,325,938	72,221	1,068,973	150	72,371
a) Issue of subordinate voting shares for cash under employee share purchase plan	39,998	572			572
b) Exercise of options for cash	12,000	38			38
c) Conversion of Special Shares to subordinate voting shares	544	4	(27,200)	(4)	—
Issued and outstanding December 31, 1990	11,378,480	72,835	1,041,773	146	72,981
Authorized, December 31, 1990 and 1989	unlimited		12,000,000		

Preferred Shares and Junior Preferred Shares

Such classes of shares may be issued in one or more series with such designations, preferences, rights, privileges, restrictions, and conditions attached as may be determined by the directors.

Authorized — 10,000,000 Preferred Shares and 20,000,000 Junior Preferred Shares;

Issued and outstanding — none

Special Shares

The articles of the company provide that, subject to the Canada Business Corporations Act, Special Shares are:

- (i) not transferable except in certain limited circumstances;
- (ii) ranked, as to payment of dividends and repayment of capital, junior to all other existing shares of the company;
- (iii) limited as to repayment of capital to the amount paid up thereon;
- (iv) not entitled to dividends except in a year in which dividends of at least \$0.375 have been paid on the subordinate voting shares and then payable subject to prescribed limits;
- (v) entitled to 10 votes per share at a meeting of shareholders;
- (vi) only redeemable on or after June 30, 1991 at the redemption price of \$0.075 per share;
- (vii) purchasable by the company at any time;
- (viii) convertible by the holder into subordinate

voting shares at any time on the basis of one subordinate voting share for 50 Special Shares.

The Special Shares carry a preemptive right entitling the holders to purchase newly issued Special Shares in proportion to such shareholders' holdings of Special Shares. On the issue of additional subordinate voting shares (except in certain circumstances) or on the issue of any security convertible into subordinate voting shares, the company is required to offer to the Special shareholders, at a specified price, sufficient additional Special Shares in proportion to their holdings of Special Shares to bring the number of Special Shares, to be outstanding thereafter, up to 10% of the number of subordinate voting shares outstanding on a fully diluted basis. Neither Special Shares nor subordinate voting shares are to be subdivided or consolidated without the other being subdivided or consolidated on the same basis.

Subordinate voting shares

Each subordinate voting share entitles the holder to:

- (i) one vote per share;
- (ii) receive dividends when declared;

(iii) receive, on dissolution of the company, subject to the prior rights of the holders of Preferred and Junior Preferred Shares but in priority to the rights of the holders of Special Shares, the amount

paid up thereon together with any declared and unpaid dividends and, after payment to the holders of Special Shares of the amount paid up

Employee stock options

In 1990, the company granted 55,000 options to full-time employees, 40,000 options expired, 347,500 options were cancelled and 208,500 options reissued, and 12,000 options on subordinate voting shares were exercised.

At December 31, 1990, 452,500 subordi-

Employee share purchase plan

In 1988, the company introduced a share purchase plan to qualified employees. Under the plan, a qualified employee was eligible to purchase subordinate voting shares of the company having an aggregate cost to the employee of 10% of the employee's annualized base earnings. The company provides an interest-free loan to the full amount of the employee's commitment, repayable over three years and secured by the subordinate voting shares purchased under the plan. At the

Shares required for future use

At December 31, 1990, a total of 510,489 subordinate voting shares may be required for future issue as follows: 20,835 for conversion of the Special

on such Special Shares, to receive any declared and unpaid dividends thereon together with the remaining property of the company.

nate voting shares were reserved for issuance upon the exercise of options granted, including 322,500 to officers of the company, at prices ranging from \$3.205 to \$24.00 per share and averaging \$11.13 per share. These options may be exercised at various periods to the year 2000.

end of each of these three years, the company will pay a bonus to each participant equal to 13-1/3% of the employee's commitment to be used to purchase additional subordinate voting shares.

Employees have purchased or are committed to purchase a total of 494,900 subordinate voting shares under the 1988 plan at \$14.28 per share. At December 31, 1990, outstanding loans amounted to \$206,436 (1989 - \$1,397,000).

Shares, 452,500 for exercise of stock options and approximately 37,154 for participants in the 1988 employee share purchase plan.

9. COMMITMENTS

The future minimum payments under operating leases are \$30,853,000 with payments for the next five years as follows:

(\$000s)	Annual rental
1991	\$ 4,447
1992	3,760
1993	2,923
1994	2,360
1995	2,111
5 year commitment	\$ 15,601

10. PENSION AND RETIREMENT PLANS

The company has several defined benefit pension plans, both contributory and non-contributory, which cover substantially all employees. The plans are funded by the company in accordance with independent actuarial valuations. The plan assets

At December 31, 1990, the company has entered into foreign exchange contracts as hedges against identified transactions. Under such contracts Spar is committed to sell \$27,875,000 U.S. dollars at an average rate of \$1.18148 Canadian, and is committed to buy 2,533,200 German Deutsche Marks at an average rate of \$.75751 Canadian and 81,900,000 Spanish Pesetas at an average rate of \$.01128 Canadian.

These contracts mature on various dates during 1991.

are invested primarily in publicly traded equity and fixed income securities. Retirement benefits are based on various factors including remuneration and the employees' years of service.

Based on the actuarial valuations dated January 1, 1990, the present value of accrued pension obligations as at December 31, 1990 was \$57,248,000 (1989 – \$49,974,000) and the market value of the fund assets available to dis-

charge these obligations was \$56,637,000 (1989 – \$59,774,000).

The net expense in respect of all pension and retirement plans was \$4,822,000 (1989 – \$2,311,000).

11. GOVERNMENT ASSISTANCE

On February 14, 1986 the Federal Government executed a Memorandum of Understanding (M.O.U.) under which the Government will share (to a maximum of \$130 million or 43.6% of the total investment by the company) the costs of research and development and capital expenditures with the company over the period 1986 to 1992.

Government assistance received and receivable from the Federal Government related to research and development activities and capital expenditures in 1990 totalled \$7,499,000 (1989 – \$14,790,000). This assistance normally takes the form of grants which may be repayable in the form of royalties based on future sales levels (\$000s)

related to the projects funded, or the company's ability to meet certain investment targets as specified in the agreements. At December 31, 1990 no provision for repayment has been recorded with respect to contributions received and receivable. Such amounts, if any, that may be repayable will be accounted for in the period in which conditions arise that will cause repayment. Government assistance with determined repayment requirements is recorded as a liability when received.

Government assistance received and receivable at year end has been applied to reduce the cost of the related expenditures or recorded as a liability as follows:

	1990	1989
Research and development costs	\$ 5,483	\$ 11,967
Long term debt	2,016	2,823
	<u>\$ 7,499</u>	<u>\$ 14,790</u>

12. STATEMENT OF CASH FLOW

Items not affecting cash

The components of net income (loss) which did not affect cash consist of the following:

(\$000s)	1990	1989
Depreciation	\$ 11,859	\$ 13,271
Amortization of deferred development costs	1,262	1,177
Deferred income taxes	(1,571)	(6,075)
Accrued incentive revenue	373	(626)
Deferred pension costs	557	(596)
Equity loss (income) on investments	418	(103)
Items not affecting cash	<u>\$ 12,898</u>	<u>\$ 7,048</u>

Net increase in cash invested in working capital related to operations

The net increase in cash invested in working capital related to operations results from the

following decreases (increases) in working capital components:

(\$000s)	1990	1989
Accounts receivable	\$ 5,926	\$(15,909)
Inventories	(4,325)	17,787
Prepaid expenses and other	(295)	(715)
Accounts payable and accrued charges	17,452	(6,380)
Customer advance payments	(5,281)	4,568
Net (decrease) increase in working capital related to operations	<u>\$13,477</u>	<u>\$ (649)</u>

13. UNUSUAL ITEMS

During 1989, management instituted a program of organizational reviews. As a result, a provision of \$8,600,000 was made to rationalize Spar's organization and certain operations, focus the business and improve operational effectiveness.

Further provisions were made of \$1,500,000 to implement external environmental improvements and \$1,500,000 as a one-time charge to relocate the Aviation Services Division to a new facility.

14. INDUSTRY SEGMENT INFORMATION

The company's operating divisions have been grouped into two industry segments.

It is the company's policy to price internal

sales or transfer values for services, generally on an equivalent basis as that used for pricing externally.

	Aviation Segment		Systems Segment		Eliminations		Consolidated	
	1990	1989	1990	1989	1990	1989	1990	1989
(\$000s)								
External revenues	\$ 50,396	\$ 43,700	\$285,295	\$189,463			\$335,691	\$233,163
Intersegment revenues	2,916	4,671	11	50	\$(2,927)	\$(4,721)	—	—
Total revenue	\$ 53,312	\$ 48,371	\$285,306	\$189,513	\$(2,927)	\$(4,721)	\$335,691	\$233,163
Segment operating profit	\$ 2,896	\$ 1,853	\$ 19,125	\$ 5,045	\$ (449)	\$(1,033)	\$ 21,572	\$ 5,865
General corporate expenses							(13,012)	(10,075)
Interest and other expenses, net							(3,695)	(2,938)
Unusual items							—	(11,600)
Income tax expense (recovery)							(2,150)	6,930
Extraordinary item — income tax recovery							—	2,600
Net income (loss)							\$ 2,715	\$(9,218)
Identifiable assets	\$ 42,635	\$ 33,972	\$155,951	\$147,580			\$198,586	\$181,552
Other assets							3,574	76,363
Total assets							\$202,160	\$257,915
Capital expenditures	\$ 6,058	\$ 3,120	\$ 18,846	\$ 7,436				
Depreciation and amortization	\$ 2,247	\$ 1,863	\$ 10,587	\$ 12,115				

- The company operates principally in Canada.
- The company's revenues from export markets were approximately \$141,160,000 in 1990 (1989 — \$108,023,000).
- A significant portion of the company's business is with various branches and agencies of the Canadian government and crown corporations as well as with foreign government agencies.

Aviation Segment includes: (i) gears and transmission systems and equipment for gas turbine engines, fixed and rotary wing aircraft

and robotic applications; (ii) repair and overhaul of a wide range of commercial and military aircraft instrumentation and mechanical components and helicopter maintenance.

Systems Segment includes: (i) satellite systems and subsystems and ground-based satellite communications systems; (ii) space robotic systems for space and terrestrial applications; (iii) electro-optics systems; and (iv) shipboard communication systems and navigation and tracking aids.

ELEVEN-YEAR REVIEW

(dollars in thousands, except per share figures)

Earnings (loss) per subordinate voting share

Basic

- income (loss) from continuing operations
- income (loss) before extraordinary item (3)
- net income (loss) (3)

Fully diluted

- income from continuing operations
- income (loss) before extraordinary item (3)
- net income (loss) (3)

Dividends declared per

Subordinate voting share

Preferred share

Shareholders' equity per subordinate voting share outstanding at year end (3)

Revenues (1)

Income (loss) from continuing operations

Income (loss) before extraordinary item (3)

Net income (loss) (3)

Capital expenditures (net of government grants and tax credits) (2)

Long term debt (including current portion) (2)

Shareholders' equity (3)

Working capital (2) and (3)

Ratio of current assets to current liabilities (2) and (3)

Number of employees (2)

Number of shareholders

Subordinate voting

Preferred and Special

* Does not include exercise of warrants which would be anti-dilutive

** Fully diluted not shown as effect would decrease loss per share.

(1) Amounts reported are for continuing operations only. Years prior to 1984 have been restated to exclude discontinued operations.

(2) Amounts reported for 1984 and prior years have not been restated; such years include historical amounts for discontinued operations.

(3) The 1987 and 1986 amounts have been restated to reflect a prior period adjustment recorded in 1988.

	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980
							1.88	1.73	1.34	0.44	(0.17)
		(1.05)		0.38			1.73				
\$0.24		(0.82)	0.56	(0.53)	0.39	1.41	1.26	1.42	1.43	0.37	(0.28)
							1.65	1.43	1.06	0.40*	**
		(1.05)		0.38			1.52				
\$0.24		(0.82)	0.56	(0.53)	0.39	1.33	1.15	1.20	1.12	0.34*	**
\$0.12		0.20	0.28	0.36	0.46	0.46	0.40	0.35	0.20		0.15
								0.54	1.08		1.08
\$7.95		7.81	8.79	8.29	9.14	8.16	6.45	5.33	3.85	2.58	2.20
\$335,691	233,163	269,967	236,121	191,018	223,278	190,031	209,321	169,121	113,101	120,986	
						15,916	12,709	8,049	2,554	(375)	
	(11,818)		4,037			14,597					
\$2,715	(9,218)	6,189	(5,763)	4,122	13,070	10,661	10,423	8,580	2,167	(877)	
\$26,803	11,539	11,981	17,499	9,397	8,660	13,738	4,788	2,525	1,678	4,155	
\$7,234	5,404	3,199	1,408	2,418	22,786	31,381	29,796	8,256	12,198	7,000	
\$90,550	88,589	99,041	89,916	98,310	79,521	56,715	42,567	25,635	17,463	15,645	
\$7,143	14,997	27,844	30,582	48,203	58,561	54,662	54,835	17,096	11,758	3,227	
1.1	1.1	1.2	1.2	1.4	1.9	2.1	2.1	1.2	1.3	1.1	
2,550	2,114	2,107	2,122	2,089	2,221	2,172	2,041	1,902	1,895	2,100	
3,723	3,866	4,362	4,392	4,459	4,590	4,452	3,489	2,800	2,930	2,970	
36	38	38	39	39	40	42	57	64	620	675	

CORPORATE INFORMATION

DIRECTORS

David R. Beatty
President
Weston Foods
George Weston Limited
(Elected director 1983)

Larry D. Clarke
Chairman of the Board
Spar Aerospace Limited
(Elected director 1967)

Camille A. Dagenais
Director
The SNC Group
(Elected director 1980)

Allan A. Hodgson†
Vice President and
Chief Financial Officer
Alcan Aluminium
Limited
(Elected director 1987)

Philip A. Lapp†
President
Philip A. Lapp Limited
(Elected director 1967)

John D. MacNaughton
President and Chief
Executive Officer
Spar Aerospace Limited
(Elected director 1989)

Roger J. Maggs
President
Metal Marketing and
Recycling, Alcan
Aluminium Limited
(Elected director 1988)

Earl H. Orser†
Chairman of the Board
London Life Insurance
Company
(Elected director 1978)

David A.B. Steel
Associate Counsel
Holden Day Wilson
(Elected director 1967)

Barbara L. Steele†
Company Director
(Elected director 1980)

Ihor Suchoversky
Retired Executive
(Elected director 1986)

DIRECTORS EMERITUS

David S. Beatty
(Elected director 1969)
(Appointed Director
Emeritus 1985)

Roland B. Dodwell
(Elected director 1967)
(Appointed Director
Emeritus 1986)

William H. Jackson
(Elected director 1967)
(Appointed Director
Emeritus 1985)

† Members of the
Audit Committee

OFFICERS

Larry D. Clarke
Chairman of the Board

Earl H. Orser
Vice Chairman of the
Board

John D. MacNaughton
President and Chief
Executive Officer

Anthony L. Anderson
Executive Vice President
(President and Group
Executive, Aviation
Group)

E. Peter Birch
Vice President

Gil A. Branchflower
Vice President, Mobile
Servicing Systems
Division

David C. Cleland
Vice President

Charles J. Dannemann
Vice President
(President and Group
Executive, Advanced
Technology Systems
Group)

Gord A. Epp
Vice President and
General Manager
Aviation Services
Division

William R. Fitzgerald
Vice President
(President and Group
Executive, Satellite
and Communications
Systems Group)

Bryan H. Held
Vice President, Finance
and Administration

J. Ron McCullough
Vice President,
Corporate Planning
and Affairs

Ken J. Perry
Vice President and
General Manager
Satellite and
Communications
Systems Division
(Assistant Group
Executive, S&CS
Group)

Sheldon Polansky
Vice President, Legal
Counsel and Secretary

Karsten J. Westphal
Vice President,
International Operations

AUDITORS

Ernst & Young

TRANSFER AGENTS

Montreal Trust
Company of Canada

LISTED

Toronto Stock Exchange
Montreal Exchange
(Trading Symbol: SPZ)

SPAR LOCATIONS

Corporate Office
5090 Explorer Drive
Suite 900
Mississauga, Ontario
Canada
L4W 4X6
Tel. (416) 629-7727
Telex: 069-60108
Fax (416) 629-0854

**Government
Relations Office**
222 Queen Street
Suite 402
Ottawa, Ontario
K1P 5V9
Tel. (613) 563-0230
Fax (613) 563-4284

AVIATION GROUP

**Aviation Services
Division**
7785 Tranmere Drive
Mississauga, Ontario
L5S 1N5
Tel. (416) 673-6000
Telex 065-24240
Fax (416) 671-5802

**Gears and
Transmissions Division**
825 Caledonia Road
Toronto, Ontario
M6B 3X8
Tel. (416) 781-1571
Fax (416) 781-2648

ADVANCED
TECHNOLOGY SYSTEMS
GROUP

**Mobile Servicing
Systems Division
Advanced Technology
Systems Division**
1700 Ormont Drive
Weston, Ontario
M9L 2W7
Tel. (416) 745-9680
Telex 065-27360
Fax (416) 745-4172

**Electro-Optical
Systems Division**
1235 Ormont Drive
Weston, Ontario
M9L 2W6
Tel. (416) 746-7252
Telex 065-27360
Fax (416) 746-0181

SATELLITE AND
COMMUNICATIONS
SYSTEMS GROUP

**Satellite and
Communications
Systems Division**
21025 Trans Canada
Highway
Ste. Anne de Bellevue,
Quebec
H9X 3R2
Tel. (514) 457-2150
Telex 05-822792
Fax (514) 457-2724

APPLIED SYSTEMS GROUP

365 March Road
Kanata, Ontario
K2K 1X3
Tel. (613) 592-3430
Telex 053-4714
Fax (613) 592-4486

115 Emily Street
Carleton Place, Ontario
K7C 1S7
Tel. (613) 253-3020
Fax (613) 253-3033

WHOLLY-OWNED
SUBSIDIARIES

**Spar Aerospace
Holdings U.S. Inc.
Spar Aerospace (U.S.)
Limited**
1001 Jefferson St.
Suite 550
Wilmington, Delaware
19801 U.S.A.
Tel. (302) 594-4413

**Astro Aerospace
Corporation**
6384 Via Real
Carpinteria, California
93013-2993 U.S.A.
Tel. (805) 684-6641
Fax (805) 684-3372

**Commercial
Telecommunications
Corporation (COMTEL)**
2811 Airpark Drive
Santa Maria, California
93455 U.S.A.
Tel. (805) 928-2581
Telex 467505
Fax (805) 925-2540

SPAR

