

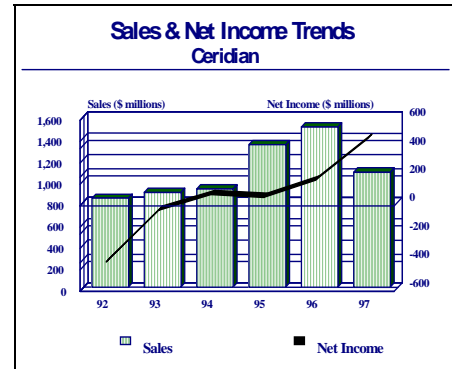
ARCHIVED REPORT

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Ceridian Corporation - Archived 9/99

Outlook

- In December 1997, Ceridian sold Computing Devices International to General Dynamics for \$600 million
- Sale was pursued in order to focus Ceridian entirely on its information services business
- The company is now known as General Dynamics Information Systems



Headquarters

Ceridian Corporation
8100 34th Avenue South
Minneapolis, MN 55425
Telephone: (612) 853-8100
Web Site: <http://www.ceridian.com>

Ceridian Corporation is a new services company that emerged from the reshaping of Control Data Corporation (CDC) in mid-1992. The company provides business customers with payroll processing and other employer services, media and market research, and network services. Ceridian also provides technology-based services and products to defense and civil government markets worldwide.

As a result of the reshaping, Control Data Corporation split into two, roughly equal business units: Control Data Systems and Ceridian Corporation. Ceridian will now handle all of the former CDC's military business

while the new Control Data Systems will concentrate on the computer market. The separation is expected to provide each company with increased flexibility and ability to pursue cooperative ventures, business combinations and other actions to grow and improve its competitive position. Ceridian now operates all of CDC's former defense business, now known as Computing Devices International.

In January 1998, Ceridian sold Computing Devices International to General Dynamics for \$600 million. The sale was undertaken to focus Ceridian entirely on its information services business.

The company employed 8,000 at the beginning of 1998. Ceridian's stock is traded on the NYSE under the symbol "CEN." The company's auditors are KPMG Peat Marwick LLP.

Structure and Personnel

Lawrence Perlman
Chairman, President and Chief Executive Officer
Ronald Turner
Executive Vice President, Operations

John (Jack) Eickhoff
Executive Vice President and Chief Financial Officer
Norma Anderson

Vice President, Diversity Resources and Public Affairs
 Stephen Ciesinski
 President, Resumix
 Nancy Foltz
 Vice President, Communications
 Tony Holcombe
 President, Comdata
 Shirley Hughes
 Vice President, Human Resources
 Carl Keil
 President, Ceridian Employer Services
 Stephen Morris
 President, The Arbitron Company

Gary Nelson
 Vice President and General Counsel
 James O'Connell
 Vice President, Government Relations
 Bob Severson
 Vice President, Technology
 Bruce Thew
 Managing Director, Centrefile
 Linda Hall Whitman
 President, Ceridian Performance Partners
 John Grierson
 Vice President, and Treasurer
 Loren (Buzz) Gross
 Vice President and Corporate Controller
 John Haveman
 Vice President, Secretary and Associate General Counsel

Product Area

Following the sale of Computing Devices in early 1998, Ceridian is made up of one industry segment, Information Services.

Information Services. This segment includes The Arbitron Company, Comdata Corporation, and a number of human resource businesses: Ceridian Employer Services, MiniData, Usertech, Tesseract, People Partners, and Resumix.

Defense Electronics. Through Computing Devices International, this segment provides computer systems, hardware, software and related services for the needs of

the defense and space industries worldwide. The unit also provides system and subsystem integration and information processing systems primarily for information needs, militarized and nonmilitarized computers, displays and mass storage products to government customers. This segment is pursuing several niche defense markets: ASW, ground-based fire control, avionics, shipboard systems, display systems, advanced systems, reconnaissance systems and communications systems. *(Sold to General Dynamics in 1998).*

Facilities

The major facilities associated with defense and aerospace programs are listed below. These facilities are now owned by General Dynamics.

Central Region

Computing Devices International, 8800 Queen Ave South, Minneapolis, MN, 55431-1996, Telephone (612) 921-6000. Web Site <http://www.gd-is.com>. This is the primary location for this subsidiary's operations. Major products include airborne computers, militarized disk memories, shipboard defense computers and spaceborne defense computers. Under General Dynamics this unit is now known as Information Systems.

International

Computing Devices Canada, 3785 Richmond Rd, Bells Corner, Nepean, Ontario, Canada K2H 5B7. Web Site <http://www.computingdevices.com> Telephone (613) 596-7000. The division's products are anti-submarine warfare computers, armored vehicle fire control systems, parameter security systems and militarized CRT displays.

Computing Devices Company Ltd, Castleham Road, St. Leonards On Sea, East Sussex, England TN38 9NJ. Telephone: (44 1424) 85 34 81. The unit provides aircraft stores management systems and aerial reconnaissance systems.

Corporate Overview

As a result of the sale of Computing Devices International in late 1997, Ceridian's defense electronics

unit, Ceridian now operates exclusively in the information services industry. Ceridian's information

services businesses, which consist of its Human Resource Services businesses ("HRS"), its Comdata subsidiary and its Arbitron division, provide products and services to customers in the human resources, trucking and electronic media markets. These businesses collect, manage and analyze data and process transactions on behalf of customers, report information resulting from such activities to customers, and provide customers with related software applications and services. The technology-based products and services of these businesses are typically provided through long-term customer relationships that result in a high level of recurring revenue.

New Products and Services

The Coyote. This is a new light armored surveillance vehicle for the Canadian Army. Computing Devices supplies the Reconnaissance Vehicle Surveillance System (RVSS) which enables the Coyote to survey the battlefield and identify threats and terrain within a 10-mile radius, in all kinds of weather, day or night. The first two systems for this program were delivered in January 1996 and the remainder (estimated at 200) will be completed by the end of 1997.

Project IRIS. Project IRIS is a part of the Canadian National Defense Tactical Command, Control and Communications System (TCCCS) and when completed will provide the Canadian Land Forces with a field radio system and supporting voice and data distribution facilities. In 1990 Computing Devices Canada completed negotiations with the Canadian Department of National Defense as prime contractor and signed a contract for \$860 million, valued at \$1.1 billion over its life. IRIS is expected to continue for at least 10 years. During 1994 and 1995, Computing Devices recorded revenue from the IRIS contract of \$154 million and \$105 million, respectively, which represents about 32 percent and 23 percent, respectively, of the unit's revenue in those years.

Plant Expansion/Organization Update

Control Data Corporation No More. Effective June 1, 1992, Control Data Corp (CDC) split into two business units: one a planned spin-off of its computer operations – Control Data Systems, Inc; and the other, Ceridian, essentially the parent company in charge of military and business service activities. The move comes after years of divestitures, shutdowns, and downsizing during which sales dropped more than half from a \$3.6 billion high in 1988. The decision to split the company came after months of internal debate over future directions, and a fruitless search for new capital to fund Control Data Corporation's various operating units. According to Lawrence Perlman, President and CEO of both the

former Control Data Corporation and of the new Ceridian, "the ability of Control Data Systems and Ceridian to attract new business should be enhanced because potential investors and lenders will better understand the nature and strengths of each company, and be able to value each entity more in line with its performance and potential."

Mergers/Acquisitions/Divestitures

General Dynamics Acquires Computing Devices. In December 1997, General Dynamics Corporation completed its acquisition of Ceridian's Computing Devices International unit for \$600 million. Computing Devices, headquartered in Bloomington, Minnesota, is a defense electronics and systems integration business with estimated 1997 sales of nearly \$600 million. It holds a leading position in the Canadian defense electronics market, and important niches in the US defense market. It serves defense and other government agencies worldwide, as well as commercial customers in selected markets. Computing Devices is a leader in more than a dozen market segments, including ruggedized subsystems for harsh environments, real-time software systems, communications, intelligence and surveillance.

"This is an excellent organization with a great work force and a strong management team – and we see synergies that will make all our businesses more robust," said General Dynamics Chairman and CEO Nicholas D. Chabraja. "The electronics content of major defense platforms has grown significantly in the past decade. Our acquisition of Computing Devices, which will be immediately accretive to earnings, strengthens our role as a prime contractor by improving our capabilities in that area.

"This is a superb strategic fit, particularly with our land combat systems business, and it complements our recent acquisition of Advanced Technology Systems from Lucent Technologies. Computing Devices further augments our position in systems integration; communications architecture and security; signal processing; high-speed data processing; battlefield awareness; and the application of commercial off-the-shelf components," said Chabraja.

"Computing Devices provides us new avenues for improving our existing product lines to extend their useful lives, and for making next-generation systems more capable," he added. "At the same time, it opens up new markets and alliances where we can build on the core strengths of our ground combat and marine operations."

Following the close of the transaction Computing Devices is now operated as a wholly-owned subsidiary

of General Dynamics, called Information Systems. Computing Devices employs 3,300 people in facilities in Minnesota; Calgary, Alberta, and Ottawa, Ontario, Canada; Hastings, United Kingdom, and an office in Washington, D.C.

Computing Devices is General Dynamics' sixth acquisition in just over two years. The company bought Bath Iron Works for \$300 million in September 1995; Teledyne Vehicle Systems for \$55 million in April 1996; two Lockheed Martin units – Defense Systems and Armament Systems – for \$450 million in January 1997; and Advanced Technology Systems from Lucent Technologies for \$284 million in October 1997. When the Computing Devices transaction is completed, General Dynamics will have approximately 31,000 employees and annual sales of approximately \$5 billion.

1996 Acquisitions. Ceridian acquired nine transportation and human resource companies during 1996. The companies acquired are: Information Learning Systems, EAS Technologies, Computer Payroll Services, Employee Assistance Associates, The Partnership Group, Washington Consulting Services & Technologies, Transportation Communication Consulting, Inter-Point Management Company, and TIC Financial Services. These operations are expected to produce an estimated \$60 million in revenue during 1997.

1995 Acquisitions. During the course of 1995 Ceridian acquired several companies including Comdata, Resumix, and Centrefile. All of the company's latest acquisitions are aimed at building its Information Services business.

Teaming/Competition/Joint Ventures

British Aerospace. In early 1997, Computing Devices International entered into an agreement with British Aerospace Systems & Equipment (BASE) based in Plymouth, England, to jointly market a Digital Terrain System (DTS) for military aircraft. This system comprises BASE's software-based TERPROM and Computing Devices' PowerPC avionics computer. This DTS offers increased functionality for the aircraft when embedded into the AN/AYK-14 mission computer, allowing military aircraft to fly at very low levels in all weather conditions, day or night. The primary markets for this upgrade system are existing AN/AYK-14 platforms including F/A-18, F-14, AV-8B, EA-6B and V-22 aircraft in both the US Navy and foreign operators of those aircraft.

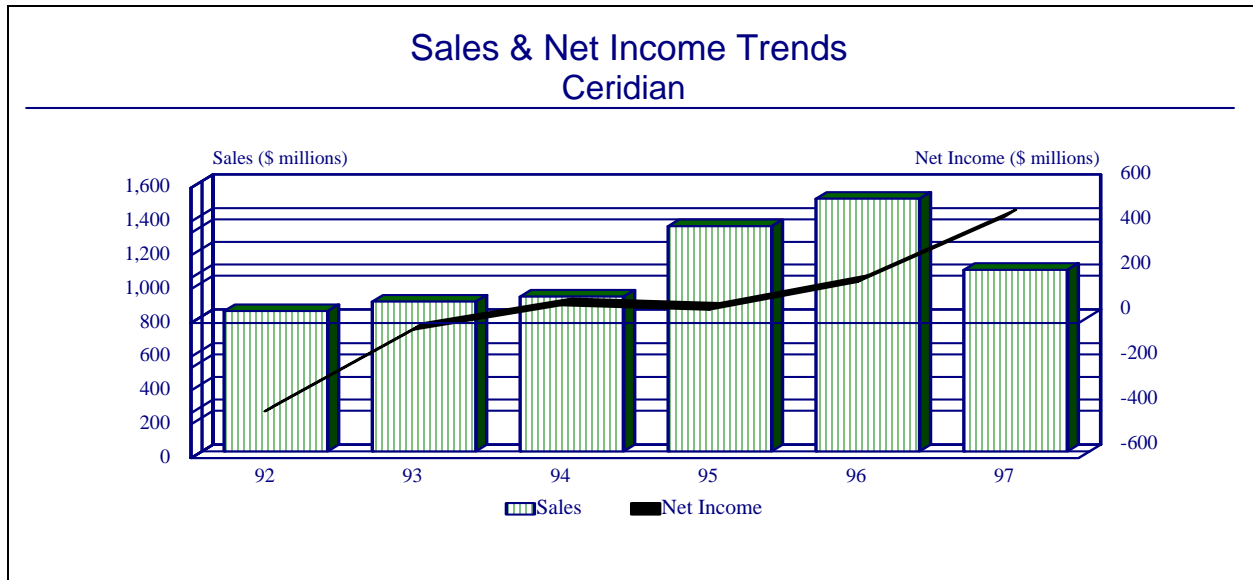
Thomson-CSF. In January 1991, the CDC signed an agreement with the Computer Products Group of Thomson-CSF to allow for joint marketing of a number of CDC and Thomson-CSF products, services and systems. Equipment involved includes ruggedized and militarized products, disk drives, workstations, space computers, braking systems and some technology transfers pending government approvals.

MIDSCO. This is an international consortium of electronics firms that were selected to pursue full-scale development of the Multifunctional Information Distribution System (MIDS). MIDS is intended to provide secure, digital, anti-jam voice communications for the F/A-18 Hornet, and the European Fighter Aircraft and French Rafale. Consortium members include: Computing Devices International (Canada), Siemens (FRG), Thomson-CSF (France), Italtel (Italy), Inisel (Spain) and GEC's US subsidiary (then Plessey Electronics Systems).

Financial Results/Corporate Statistics

Ceridian posted net income of \$472.4 million on sales of \$1.1 billion for 1997. The large increase in income includes a gain of \$386.3 from the sale of Computing Devices International. Figures from 1992 to 1996 have not been restated to conform to the company's current presentation. The lower income for 1995 was due to the early retirement of debt acquired in the Comdata acquisition. The loss for 1992 was attributed to a \$67 million restructuring charge and an \$8.4 million extraordinary charge, primarily associated with the termination of certain businesses at Arbitron. Taking into account losses from discontinued operations of \$321.6 million and a \$41.8 million charge for adopting SFAS No. 106, Ceridian reported a net loss for 1992 of \$392.5 million. Latest full-year statistics are given below. Percentages of sales coming from government are estimated.

Y/E December 31	1992	1993	1994	1995	1996	1997
(\$ millions)						
Net Sales	830.3	886.1	916.3	1333.0	1495.6	1074.8
Percent Govt US	28.0	26.0	24.0	16.0	15.0	NA
Percent Govt Canada	11.0	15.0	20.0	14.0	16.0	NA
Net Income	-392.5	-30.4	78.6	58.6	181.9	472.4
Backlog	-	1213.0	1209.0	1004.0	851.0	NA

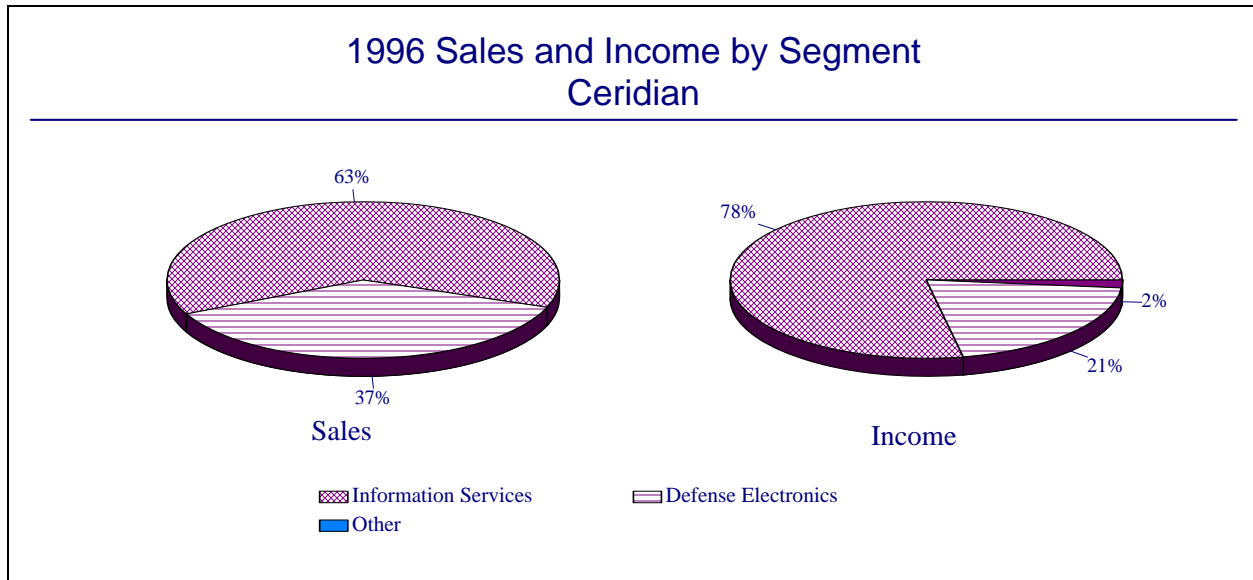


Industry Segments

A breakdown of Ceridian's sales and operating income by major market segment for the past four years is given below. Following the sale of Computing Devices International, Ceridian operates in one segment, Information Services.

SALES	1992	1993	1994	1995	1996
(\$ millions)					
Information Services	408.7	424.8	430.0	823.5	924.6
Defense Electronics	412.4	461.3	486.3	509.5	553.0
Other	9.2	-	-	-	-
TOTAL	830.3	886.1	916.3	1333	1477.6

OPERATING INCOME	1992	1993	1994	1995	1996
(\$ millions)					
Information Services	2.5	-39.0	58.6	108.6	155.5
Defense Electronics	19.7	21.5	30.6	33.7	41.0
Other	-47.7	7.4	-13.0	-7.6	3.1
TOTAL	-25.5	-10.1	76.2	134.7	199.6



Strategic Outlook

Following a difficult struggle in the early 1990s, Ceridian has successfully repositioned itself as an Information Services business capable of meeting a wide range of business IS needs. A key transaction in this transition was sale of Computing Devices International, the company's defense electronics unit.

In citing reasons for the divestiture, Lawrence Perlman, chairman and chief executive officer of Ceridian said that, "Computing Devices is significantly different from the information services model, which consists of businesses with several shared characteristics – growing markets, recurring revenue, strong cash flow, low capital investments and growing profitability. In addition, the increasing consolidation of the aerospace and defense markets has caused mid-sized suppliers like Computing Devices to re-evaluate their long-term ability to grow and remain competitive with larger companies."

"This is a more than \$550 million business that has been an important financial contributor to Ceridian, but industry consolidation has resulted in potentially attractive pricing of defense electronics assets, and we have determined that the timing is right to seek a buyer for Computing Devices and allow Ceridian management to focus exclusively on the information services businesses."

In terms of performance, Computing Devices International, has posted five years of consecutive growth. Key to Computing Devices' continued success is its focus on selected defense electronics market niches that remain relatively stable, largely because the

military is now emphasizing upgrades that extend the life and capabilities of existing equipment. This recipe for success is likely to remain unchanged at General Dynamics, the unit's new owner.

Currently, Computing Devices' largest single program remains the Canadian IRIS system. The \$1.1 billion IRIS contract was originally awarded in 1991, and is expected to remain a steady revenue source until 2000. The IRIS program alone is estimated to make over \$700 million of the unit's total backlog. Winning the IRIS contract and effectively managing the initial stages of this large project have helped to create additional systems integration opportunities for Computing Devices.

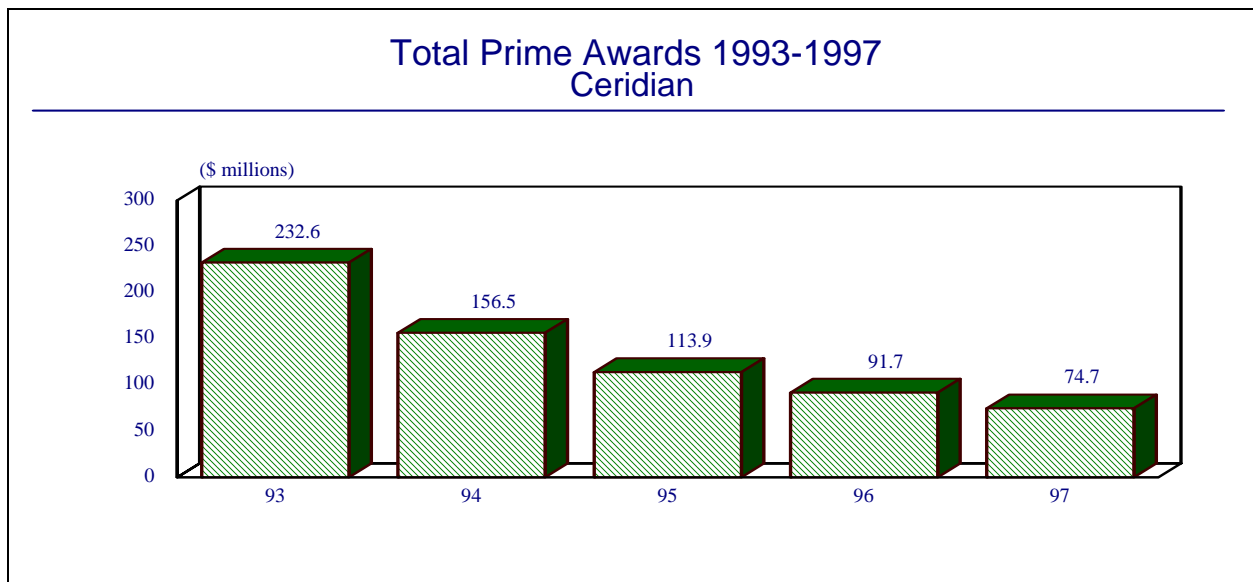
As the new General Dynamics Information Systems unit, Computing Devices future growth is expected to be derived from retrofitting existing programs with improved electronic subsystems. In addition, with the US military beginning to embrace information technology, many opportunities are expected to open up for Computing Devices. At present, the DoD expects to be capable of engaging in full-scale information warfare in which information itself is a potent capability as well as a key target. Current developmental efforts are focusing on improving methods of command, control, communications, computers, and intelligence (C4I) – all core components of Computing Devices.

With the sale of Computing Devices complete, the salient data of this report will be combined with the General Dynamics report and the Ceridian update will be dropped from the service.

Prime Award Summary

Ceridian's five-year summary of awards by customer is listed in the following table. Dashes indicate information is unavailable. The historical information listed below contains data from the old Control Data Government Systems Division (now Computing Devices International).

(\$ millions)	1993	1994	1995	1996	1997
AIR FORCE	75.1	13.8	12.9	5.6	11.2
ARMY	3.9	2.8	1.0	0.1	0.1
CORPS OF ENGINEERS	25.5	23.5	22.8	37.1	17.9
DARPA	0.0	0.0	0.0	0.0	11.5
DEFENSE AGENCIES	0.0	0.0	0.0	0.0	0.7
DEF LOGISTICS AGENCY	0.9	0.0	0.1	0.4	0.0
DEPT OF AGRICULTURE	0.1	0.0	0.0	0.0	0.0
DEPT OF COMMERCE	0.0	0.8	2.3	2.4	0.7
DEPT OF ENERGY	0.0	0.0	0.0	0.0	0.0
DEPT OF STATE	0.0	1.1	0.0	0.0	0.0
DEPT OF THE INTERIOR	0.0	1.2	1.0	0.3	0.0
DEPT OF TREASURY	2.6	4.3	4.6	5.1	0.7
EPA	0.1	0.1	0.1	0.0	0.0
GENERAL SERVICES ADMIN	3.5	1.8	3.0	4.0	1.7
NASA	0.1	0.0	0.0	0.0	0.0
NAVY	111.4	105.1	65.5	34.0	29.9
TN VALLEY AUTHORITY	9.4	2.0	0.6	2.7	0.3
TOTAL	232.6	156.5	113.9	91.7	74.7



Program Activity

Some important aerospace and government programs currently under way at Ceridian are listed below. The briefs are intended to provide a listing of programs that are of major importance to the company. For detailed information or analysis of specific aerospace and

defense programs or equipment, please refer to the appropriate FORECAST INTERNATIONAL binder (for example AIRCRAFT, MILITARY VEHICLES, WARSHIPS, MISSILES, ELECTRONICS, and GAS

TURBINES). The following is an outline of the company's business interests:

- Defense Electronics
- ASW
- Avionics
- C3I Systems
- Communications
- Systems Integration

The following programs are now owned by General Dynamics.

Electronic Programs

(ASW)

AQA-801 (BSP-1-1)

This is a side processor for Barra sonobuoys used in airborne anti-submarine warfare (ASW). Computing Devices Canada has developed the Barra Side Processor AQA-801 as a simple add-on system to existing acoustic processor systems such as the UYS-503 acoustic processor. The AQA-801 will provide Barra-incompatible acoustic processors with an interface system extension that allows full compatibility to be achieved with the SSQ-801 Barra sonobuoy. These processors are in service in Australia, Japan, and the United States.

SQS-510

This is a hull-mounted active sonar system. The SQS-510 is a digital active sonar system that incorporates the solid state transmission element of the SQS-505 sonar coupled to a new digital receiver and display group consisting of Computing Devices' UYS-501 digital signal processor and UYQ-501 SHINPADS (SHipboard Integrated Processing and Display System) dual-screen display system. A total of four systems have been built and delivered - one prototype on the Canadian Navy's Annapolis-class frigate, HMCS *Nipigon* and three systems on the MEKO 200-class frigates built for the Portuguese Navy. Originally intended for the Canadian Navy's Halifax class frigates, this sonar system has become a victim of contemporary defense budget cuts and force downsizing. Unfortunately, in losing the Halifax class order, Computing Devices Canada finds itself in a poor position for selling the unit domestically. Any future sales will have to depend largely on international buyers.

UYS-501

This unit is a general-purpose programmable digital signal processor designed to analyze data derived from sonar sensors. The unit is installed on surface ships of frigate class and CP-140 patrol aircraft. With the

Canadian market's prospects limited at present, Computing Devices Canada will no doubt move to market its signal processor as actively as possible among international navies, especially where the UYS-501(V) can be adapted to replace existing systems. New construction programs will also be pursued, though competition will be keen among US and European suppliers.

(Airborne Electronics)

APQ-156(V)/APG-76

The APQ-156 is an all-weather attack, ground-mapping, tracking and ranging, terrain avoidance/terrain-following, beacon detection and tracking radar for the A-6E. The APG-76 was selected for retrofit into Israeli F-4s being upgraded. Computing Devices International provides the computer for this radar system.

AYK-14

This is the Navy standard airborne computer. CDC was selected in 1976 to design the equipment and produce all the units for the Navy's requirement until 1984. In 1984 Unisys was selected as a second source, although CDC continued to receive the bulk (80 percent) of the quantities ordered. In April 1988, Unisys won the main production contract and became the sole-source supplier. CDC continues to make the upgraded P31 models. Competition for spares, support and modifications is expected to continue through the 1990s. The prime contractor for the AYK-14(V) has been Computing Devices International for quite some time, but in the spring of 1993 IBM Federal Systems (now part of Lockheed Martin) was named prime for the RISC version, with CDI as the second source. Computing Devices had previously produced 80 percent of the AYK-14(V) production work, with Unisys second-sourcing the rest. The last time Computing Devices wasn't prime was April 1988, when Unisys Computer Systems Division was selected for the potential \$30 million buy-out contract on all the remaining production of the AYK-14(V). Yet, by 1991 Unisys had dropped out as AYK-14(V) second-source due to financial reasons, returning Computing Devices to sole, prime producer status. In FY91, Computing Devices began manufacturing the VPM AYK-14(V) variants. Through 1996, a total of 7,510 systems were produced.

(C3I)

BMEWS

This is a missile early warning radar network of radar, displays, computers, and communications nets. Computing Devices International is the subcontractor for programs computers. Three BMEWS radar systems

have been built and they are located at: Thule and Sonderstrom AB, Greenland; Clear, Alaska; and Fylingdales, United Kingdom. Each site has radar, a Missile Impact Prediction System (MIPS), checkout, switching, monitoring and data equipment.

Multifunctional Information Distribution System (MIDS)

The Multifunctional Information Distribution System is intended to provide secure, digital, anti-jam voice communications (in real time) in the Lx band (960-1215 MHz), and can communicate beyond the line-of-sight through automatic relay techniques. It is intended for use on the F/A-18 Hornet (and the European Fighter Aircraft and French Rafale). Program is designed to grow to encompass applications on helicopters, ships, and ground sites. A consortium of electronics firms — Computing Devices International (Canada), Siemens (FRG), Thomson-CSF (France), Italtel (Italy), Inisel (Spain) and GEC's US subsidiary (then Plessey Electronics Systems) — were selected to form a new company called MIDSCO Inc to pursue full-scale development.

(Land- & Sea-Based Electronics)

SQS-53(V)

The SQS-53(V) is a bow-mounted sonar for surface vessels, designed for long-range passive and active

submarine detection. The SQS-53(V) is claimed to be the most advanced surface ship ASW sonar in US Navy inventory. Computing Devices International provides services related to SQS-53C program support. Modifications and production of this system is continuing.

SAR-8

The SAR-8 infrared search and target designation system is a passive, electro-optical shipborne surveillance system. Computing Devices Canada has been identified as a subcontractor on this program. So far, only two developmental systems have been built. The program has been superseded by the advanced Infrared Search and Track (IRST) system development.

(AN Equipment)

UYH-3(V)

The UYH-3(V) is a Magnetic Disk Memory Recorder-Reproducer system that interfaces and operates with various computers in many Navy applications. The UYH-3(V) provides a complete, large-capacity military disk system in a compact rack or cabinet-mountable unit. Spares production is currently ongoing to support this system. Computing Devices International is the prime for this system.

US Contract Awards

Below is a listing of major contracts awarded to Computing Devices International from the United States government in the past three years (contracts as of press date).

<u>Date</u>	<u>Award (\$ millions)</u>	<u>Contract #</u>	<u>Description</u>
1994			
8/19/94	\$32.5	N00024-88-D-5207	U-YH-16 mass memory storage devices.
9/2/94	\$17.1	N00019-94-C-0046	38 CP-2213 computers for existing F-14 A/B aircraft.
9/15/94	\$5.0	F19628-94-C-0108	Mod kit for a hard disk drive subsystem on the E-3 aircraft.
1995			
1/25/95	8.4	N00163-93-D-0006	48 AYK-14 airborne mission computers for the F/A-18 aircraft.
3/24/95	\$12.6	N00163-93-D-0006	129 kits for the upgrade of AYK-14 airborne mission computers for the F/A-18 aircraft.
3/29/95	\$5.4	N00019-94-C-0046	18 CP-2213 computers for existing F-14 A/B aircraft.
5/16/95	\$9.4	N00163-93-D-0006	96 ECP-45 kits for the upgrade of AYK-14 airborne mission computers for the F/A-18.
1996			
3/21/96	\$8.8	N00163-96-D-0014	Procure 90 mission computer upgrade kits for the F/A-18 aircraft.

<u>Date</u>	<u>Award (\$ millions)</u>	<u>Contract #</u>	<u>Description</u>
5/1/96	\$6.0	N00163-96-D-0014	Procure 36 mission computers for the Finnish Air Force F/A-18 program.

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