

# SCAN OF CITITRAN COMPETITORS

INPUT

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Formed in 1974, INPUT has become a leading international consulting firm. Clients include over 100 of the world's largest and most technically advanced companies.

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SCAN OF CITITRAN COMPETITORS

Prepared For:

CITIBANK

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## SCAN OF CITITRAN COMPETITORS

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West Florida Data Processing  
Westinghouse Computer and Instrumentation Division





**ACTION DATA SERVICES**  
7822 Banham  
Clayton, MO 63105  
(314) 862-7700

President: Robert Kleinert  
Ownership: Subsid. of Control Data Corporation  
Revenues: \$4.4 million (1978)  
INPUT estimate  
Employees: 100

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## PROFILE

- Banking Industry Revenues
  - \$4.4 million (INPUT estimate) (100% of total revenues).
- Type of Banking Services

- Processing services	100%
Remote computing	
Interactive	
	100%
- Banking Industry Specialization
  - Thrift institutions only: credit unions and savings and loan.
- Major Clients
  - ITT Financial Services.
  - General Electric Credit Corporation.
  - Nation-wide Finance.
  - Ford Credit Corporation.
- Major Competitors
  - Dial Finance, Des Moines, Iowa.
- Sales Offices
  - Headquarters location.
- Employees
  - All personnel are involved in supporting their financial services:

Marketing	5
Customer support	30
Computer operations	45
Administrative	<u>20</u>
	100

- Geographic Concentration
  - All Middle Atlantic and South Atlantic States.
  - All Midwestern, Southern, and Mountain States.
- Data Center Locations
  - Headquarters location.
- Computer Hardware
  - One IBM 370/155 and one IBM 370/158 operating in DOS.

## BANKING PRODUCTS AND SERVICES

- Action Data Services (ADS) offers two large applications to its financial clients:
  - Installment Loan.
  - Commercial Loan.
- These are on-line applications only; data is transmitted via a dedicated leased-line network.
- The fee charged for use of their network services is based on the number of branches served. An average branch is billed approximately \$400 per month.

## COMPANY BACKGROUND

- Action Data Services (ADS) was formed as a privately owned company in 1969 with the objective of providing processing services to financial institutions. Service Bureau Company, a subsidiary of Control Data Corporation, purchased ADS in September 1973.
- ADS began offering the Installment Loan package in 1969; they now have 100 client banks using it. The Commercial Loan package has been offered since 1974 with only five banks using it so far. One hundred percent of ADS revenue comes from these services.
- ADS currently serves only thrift institutions; however, in 1979 they plan to actively seek commercial bank clients. Marketing efforts will initially be concentrated in California, Arizona, and Pennsylvania due to the favorable branch banking laws in these states.

## IMPACT ON CITITRAN

- Action Data is a wholly owned subsidiary of CDC run by Bob Kleinert (ex-SBC executive). The principal applications offered are savings and installment loan processing on a remote basis. Clients are Thrift institutions, not banks. Although there is no evidence they plan to offer NOW account or shared draft processing, if they should choose to do so, they could ultimately compete with CITITRAN.



AMERICAN DATA SERVICES, INC.  
4550 Southwest MacAdam  
Portland, OR 97201  
(503) 224-9110

President: William G. Edwards  
Ownership: Subsidiary of  
Orbanco, Inc.  
Revenues: \$11 million (1978)  
Employees: 350

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## PROFILE

- Banking Industry Revenues

- \$2.25 million (25% of total revenues).

- Type of Banking Services

- Processing services 100%
- Interactive (100%) 100%

- Banking Industry Specialization

- Commercial banks.

- Major Clients

- Oregon Bank (47 branches).
- Bank of Newport (17 branches).
- Olympic Bank.

- Major Competitors

- Associated Computer Services.
- Northwest Data Systems (Subsidiary of Poorman-Douglas).
- United Data Centers (Subsidiary of Tymshare).

- Sales Offices

- Headquarters location.

- Employees

- Marketing 50
- Software services 100
- Computer operations 150
- Administrative 50
- Total personnel 350

- Geographic Concentration

- Pacific Northwestern states of Oregon and Washington.

## AMERICAN DATA SERVICES, INC.

- Data Center Locations
  - Headquarters location.
- Computer Hardware
  - Burroughs B4800.
  - Burroughs B3800.
  - MCD operating system.

## BANKING PRODUCTS AND SERVICES

- American Data Services (ADS) offers seven applications exclusively to their banking clients. These applications, available only on-line, are:
  - Demand deposit accounting.
  - Installment credit loan.
  - Personal loan.
  - Commercial loan.
  - Savings.
  - Certificate of deposit.
  - Mortgage loan.
- Specialty on-line banking services supported include:
  - Automated teller machine systems.
  - On-line teller systems.
  - Pay-by-phone systems.
  - Electronics funds transfer systems.
- Fourteen banks use these services. ADS markets its services only to banks with less than \$200 million in assets.
- Data is transmitted via a combination of leased and Western Union lines. Virtually all cities in Oregon and Southern Washington have access to the network.
- Minicomputers are installed at all remote computing locations as terminals, processors, and communications controllers. ADS has installed Burroughs, Datapoint, Data General, DEC, and Texas Instruments minicomputers.

## AMERICAN DATA SERVICES, INC.

- All software was developed in-house except for the PIPS Pay-by-Phone package which was purchased from Financial Industry Systems.

### COMPANY BACKGROUND

- American Data Systems was formed as a private corporation in 1957 to provide general business processing and software services to the Pacific Northwest. In 1969 Orbanco purchased ADS to provide processing for its affiliated Oregon Bank. ADS began offering processing services to non-affiliated banks in 1977.
- ADS has four operating divisions:
  - Financial Services Division: provides interactive banking applications in the Pacific Northwest.
  - Data Services Division: provides remote and batch processing of general business applications throughout the U.S.
  - Timberline Systems Division: provides general business, restaurant, hotel, and accounting software packages throughout the Pacific Northwest.
  - Alpine Data Systems: provides custom and packaged software to the dental and medical industries throughout the U.S.
- ADS is actively expanding its financial services division. Specialty on-line banking services were first offered in 1978 and all client banks are expected to use them by 1980. The leased-line network will be expanded this year to cover the Western and Central U.S. as far east as Atlanta. New on-line client banks will be sought throughout this region.
- By late 1979, ADS plans to offer a minicomputer based banking turnkey system. The company would not provide specifics concerning the price, applications, or hardware of the planned turnkey system.

### IMPACT ON CITITRAN

- As a subsidiary of Orbanco, ADS provides services for Northwest banks tied to the parent through correspondent or other relationships and, as such, can be thought of as a regional competitor of CITITRAN. The company's turnkey system plan obviously emphasizes its competitive posture.





ANALYSTS INTERNATIONAL  
CORPORATION  
7615 Metro Blvd.  
Minneapolis, MN 55435  
(612) 835-2330

President: Frederick Lang  
Ownership: Public (OTC)  
Revenues: \$6.8 million (1978) (INPUT  
estimate)  
Employees: 375

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## PROFILE

- Banking Industry Revenues
  - \$1 million (15% of total revenues) (INPUT estimate).
- Type Of Banking Services
  - Professional services 100%
- Banking Industry Specialization
  - Commercial banks, savings and loans, credit unions.
- Major Clients
  - American Savings and Loan Association.
  - California Federal Savings and Loan.
  - Fidelity Bank and Trust Company.
  - Fidelity Savings and Loan.
  - Marine National Exchange Bank.
  - National Bank of Detroit.
  - Northwestern National Bank of Minneapolis.
  - United California Bank.
- Major Competitors
  - Cutler-Williams, Inc.
  - Technalysis Corporation.
- Sales Offices
  - Atlanta, Chicago, Cleveland, Dallas, Dayton, Denver, Detroit, Houston, Huntsville, Kansas City, Los Angeles, Minneapolis, Philadelphia, San Francisco, St. Louis, Seattle, Tulsa.
- Employees

- Marketing	25
- Administrative	30
- Professional personnel	<u>320</u>
Total personnel	375

## ANALYSTS INTERNATIONAL CORPORATION

- Geographic Concentration
  - None. Services are marketed throughout the U.S.

## BANKING PRODUCTS AND SERVICES

- Analysts International Corporation (AIC) provides many types of professional services, including:
  - Computer Programming.
  - Management Consulting and Requirements Planning.
  - Organization and Standards Development.
  - Programming and Systems Training.
  - System Design.
- AIC banking industry specialty areas include:
  - Branch Manager Evaluation Systems.
  - Certificate of Deposit.
  - Demand Deposit.
  - Investment Analysis and Information Systems.
  - Mortgage Loan Accounting.
  - Mortgage Servicing.
  - Real Estate Statistics.
  - Trust Transactions.
- Of the over 300 clients AIC has contracted with, approximately 20 have been banks. Services provided range from system software design to complete system implementation.

## COMPANY BACKGROUND

- Analysts International Corporation was founded in 1966 in Minnesota to provide professional and consulting services.
- Revenues for fiscal year ending 6/30/78 rose 40% from \$4,905,640 in 1977 to \$6,805,000 net earnings rose 30% from \$300,164 to \$387,308 over the same period. Management projects a 44% to 50% per year growth over the next three years.
- AIC has done work for virtually all industry sectors including government, transportation, manufacturing, insurance, and banking. Thirteen percent of 1978 total revenues originated with General Motors contracts.

## ANALYSTS INTERNATIONAL CORPORATION

### IMPACT ON CITITRAN

- AIC is a system design/software development company. It is not a competitor to CITITRAN, but could be considered as a software source.



AUTOMATIC DATA PROCESSING, INC.  
405 Route 3  
Clifton, NJ 07015  
(201) 472-1000

President: Josh S. Weston  
Ownership: Public  
Revenues: \$299.3 million,  
Fiscal Year End, 6/30/78  
Employees: 8,000+

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## PROFILE

- Banking Industry Revenues
  - \$60 million (20% of total revenues).
- Type Of Banking Services
  - Processing services (100%)
    - Batch
    - Remote batch
    - Interactive
- Banking Industry Specialization
  - Commercial banks and thrift institutions.
- Major Competitors
  - Interactive Data Corporation (Data Base Services).
  - Anacomp (Processing Services).
  - General Electric Information Services (Financial Services).
  - Service Bureau Company (Financial Services).
- Sales Offices
  - All major metropolitan cities. (See data center location.)
- Employees
  - Over 8,000. No additional breakdown was available.
- Geographic Concentration
  - None. Services are available nationwide.
- Data Center Locations
  - Atlanta, Baltimore, Boston, Buffalo, Charlotte, Chicago, Cincinnati, Cleveland, Clifton, Columbus, Dallas, Denver, Detroit, Florence (KY), Fremont (OH), Hartford, Houston, Kansas City, Long Island, Los

## AUTOMATIC DATA PROCESSING, INC.

Angeles, Miami, Minneapolis, Nashville, Newport Beach (CA), New York, Philadelphia, Pittsburgh, Portland (OR), Providence, San Francisco, Stamford, St. Louis, Syracuse, Tampa, Tulsa, Washington, DC.

- Computer Hardware

-	IBM System/360 and 370	75
-	DEC System/10	25
-	DEC PDP 8 and PDP 11	125
-	Burroughs 4700	2
-	Honeywell 2200	3
-	Univac 418	3
-	Amdahl V/6	2

## BANKING PRODUCTS AND SERVICES

- ADP provides services to the banking industry from three major operating groups: Commercial Services, Network Services and Financial Data Services. There is a fourth operating group, Pension Services, that is currently very small but expected to grow rapidly.
- Each of these operating groups has services which are provided to the banking industry. At the present time, each group has its own sales and product development staff. ADP plans, in the near future, to merge the product/services offerings from these various groups to present one image of ADP offerings to the banking industry.
- The services provided by the various operating groups follows.
- Commercial Services:
  - ADP offers an Automated Customer Service program whereby banks offer ADP's payroll and other batch accounting services under a joint marketing agreement. It is the bank's responsibility to market the service and provide additional bank applications associated with the service such as direct deposit and bank check.
  - ADP provides a full range of sales promotion, officer orientation programs, and advertising materials. ADP will also normally provide sales personnel and all technical support associated with the processing.
  - Billing to bank clients is normally handled by ADP. In addition, ADP usually pays conversion and other fees to the banks for their efforts.

## AUTOMATIC DATA PROCESSING, INC.

- Network Services:

- ADP Network Services is an on-line, data base system which incorporates three primary data centers in Ann Arbor, MI, Waltham, MA, and London. These centers are tied together by minicomputers and satellite communications.
- Banking services fall into two general categories: data base (problem solving) applications, and Cash Management Services.
- Data base applications include:
  - BANCALL: an analytical system for the 14,000 FDIC insured banks.
  - FML: Financial Modeling Language.
  - CYPHERGRAPH: Bank Management Graphics.
  - TSAM: Economic/investment analysis and a series of economic data bases.
- Cash Management Services include:
  - Deposit reporting.
  - Balance reporting.
  - Automated Wire Transfer Services.
  - Other services to assist money management.

- Financial Data Services:

- Financial Data Services (FDS) offers three product lines: Personal Trust Services, Portfolio Services, and Banking and Thrift Accounting services.
  - Personal Trust Services (Teletrust) is an on-line personal trust accounting service oriented towards small bank trust departments.
  - Portfolio Services offers Teleport for bank and pension fund investment departments for managing portfolios.
  - Banking and Thrift Services offers direct accounting services for financial institutions, generally small to medium sized firms, from four banking centers and two thrift institution centers.
- The banking system applications include: Demand Deposit, Time Deposit, Commercial loan, Personal loan, and General ledger. These services are all integrated into a Central Information File.
  - Within reasonable ground transportation of the host or ADP branch office, these services are available on a batch basis. For banks willing to install their own in-house remote systems, there are no technical restraints.
  - Banking services are available throughout the Rocky Mountain States, Missouri, Oklahoma, Illinois, and the Midwestern states.
- Thrift Services support on-line teller terminals and can extend significant distances from the host locations.
  - Thrift Services are available in the Midwest and Mid-Atlantic states at the present time.

## AUTOMATIC DATA PROCESSING, INC.

- Pension Services:
  - ADP's newest banking service, offers applications which provide IRA, KEOGH and small corporation pension programs.
- Special EFT Services:
  - ADP has in the past, for the Chicago ACH, provided EFT data services. It is an area where they have the skills, some applications, and an interest to compete in.

## COMPANY BACKGROUND

- Automatic Data Processing (ADP) is one of the largest independent computer services firms in the world. Revenues have consistently increased at 20-25% per year for the last five years. Total corporate revenues for 1979 (FYE 6/30/79) are expected to be about \$360 million.
- ADP is primarily known for providing batch payroll and accounting services to businessmen. Revenues from this segment of their business is currently estimated by INPUT to be about \$100 million a year. More than 40,000 firms use ADP's payroll and accounting services.
- Although batch services will continue to provide a steady stream of income, ADP is aggressively moving into the on-line services segment. It has acquired firms offering demand deposit accounting, savings and loan applications, loan accounting, certificate of deposit and others. The on-line services are expected to grow at a faster rate than batch services.
- The majority of ADP's growth has come from acquisition. Over the past eleven years the company has purchased more than 50 organizations.

## IMPACT ON CITITRAN

- ADP is the second largest computer service firm. It is rapidly expanding its activities in banking through both batch and network related processing services. The companies new on-site hardware offerings using DEC minis are likely to become very competitive to CITITRAN once ADP develops the necessary software.



BALDWIN-DECO SERVICE CENTER  
1425 Arapahoe Street  
Denver, CO 80202  
(303) 893-3533

President: Norman Wright  
Ownership: Subsidiary of Baldwin  
United Corporation  
Revenues: \$4.9 million (1978)  
(INPUT estimate)  
Employees: 150

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## PROFILE

- Banking Industry Revenues
  - \$3.4 million (70% of total revenues) (INPUT estimate).
- Type Of Banking Services

- Processing services	80%
Remote computing (75%)	
Interactive	
Remote batch	
- Professional services	19%
- Software products	1%
	<u>100%</u>
- Banking Industry Specialization
  - Commercial banks, savings and loan.
- Major Clients
  - Central Bank of Aurora.
  - Central Bank of Colorado Springs.
  - Central Bank of Denver.
  - First National Bank of Aspen.
  - First National Bank of Grand Junction.
  - Rocky Ford National Bank.
- Major Competitors
  - Florida Software Services.
  - Local financial holding companies.
- Sales Offices
  - Headquarters location.

## BALDWIN-DECO SERVICE CENTER

- Employees

-	Marketing	15
-	Customer support	57
-	Computer operations	63
-	Administrative	<u>15</u>
		150

- Geographic Concentration

- Mountain states of Arizona, Colorado, New Mexico, Nevada, Utah, and Wyoming.

- Data Center Locations

- Headquarters location.

- Computer Hardware

- One IBM System/370 Model 150.
- One IBM System/370 Model 158.
- One IBM System/370 Model 165.
- MVS operating system.

## BANKING PRODUCTS AND SERVICES

- Baldwin-Deco Service Center (BSC) offers a number of applications to the banking industry on its processing service, including:
  - Commercial Loan Accounting.
  - Demand Deposit Accounting.
  - Electronic Funds Transfer processing.
  - Accounts Payable processing.
  - Accounts Receivable processing.
  - Installment Loan Accounting.
  - Personal Loan Accounting.
  - Trust Accounting.
  - Automated Clearing House processing.
  - Savings Accounting.
  - Consolidated Statement Accounting.
- BSC presently has approximately 45 financial clients; all but 12 are affiliated with the parent, Baldwin United Corporation.

## BALDWIN-DECO SERVICE CENTER

- All banking services are fully interactive. Data is transmitted via 2400, 4800, 9600 baud leased lines and WATS lines using IBM CICS teleprocessing software. DEC, Data General, and other minicomputers are installed at remote locations.
- Professional services available to banking institutions include management consulting, systems consulting, systems design, and contract programming.
- BSC also offers their Consolidated Statement Accounting System as a software product. Available since early 1978, seven packages have been sold. Base price is \$45,000 to \$55,000 for the DOS version, \$65,000 to \$75,000 for the OS version.

## COMPANY BACKGROUND

- Baldwin-Deco Service Center was formed by Baldwin United Corporation in 1974 primarily to provide processing services to affiliated banks, savings and loan, and insurance companies. Presently 75% of total BSC revenues originate with institutions affiliated with the parent.
- BSC markets to institutions in the Mountain states with \$700 million in assets. For clients affiliated with the parent and outside this region, BSC operates a separate communications network. All processing is performed in Denver.
- In addition to specific banking applications, BSC offers general business processing to manufacturing, insurance, and distribution clients.

## IMPACT ON CITITRAN

- Baldwin-Deco is a regional Colorado bank processor, controlled by a financial parent. It's services are comptetive with CITITRAN.



**BANKING SYSTEMS, INC.**  
Suite 1212  
Expressway Tower  
Dallas, TX 75206  
(214) 368-6786

President: William R. Roach  
Ownership: Subsidiary of Optimum  
Systems, Inc.  
Revenues: \$5,000,000 (1978) (INPUT  
estimate)  
Employees: 170

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## PROFILE

- Banking Industry Revenues

- \$5,000,000 (100% of total revenues).

- Type Of Banking Service

- Processing services 90%
  - Remote computing
  - Interactive
  - Batch services
- Professional services 10%
- 100%

- Banking Industry Specialization

- Commercial banks

- Major Clients

- The company has 100 banking customers.

- Major Competitors

- Competition for processing services comes from large banks who provide correspondent bank data processing; specifically, First National Bank of Dallas and Republic Bank of Dallas. Competition for professional services stems from independent management consultants.

- Sales Offices

- Tulsa, Oklahoma City, Dallas, and Victoria (Texas).

- Employees

- Marketing, management 34
- Operations 94
- Systems 42
- 170

## BANKING SYSTEMS, INC.

- Geographic Concentration
  - West South Central Region: Oklahoma and Texas.
- Data Centers Locations
  - Dallas, TX.
  - Oklahoma City.
  - Tulsa, OK.
  - Victoria, TX.
  - Areas not more than approximately 100 miles away are serviced via leased lines.
- Computer Hardware
  - Honeywell and IBM mainframes.
  - Interdata 7/16 minicomputers.
  - Burroughs Series 1700 minicomputers.

## BANKING PRODUCTS AND SERVICES

- Business Systems, Inc. (BSI) claims to offer the full range of basic banking applications. Specific applications available on a batch service basis include:
  - Demand Deposit.
  - Savings Deposit.
  - Time Deposit.
  - Commercial Loan.
  - Installment Loan (simple, regular, and dealer service plan loan).
  - Trust Accounting.
- Additional interactive processing applications include:
  - Customer Information File.
  - Inquiry.
  - Memo-post.
  - Data entry (for all except trust accounting).
  - POS.
  - Automated Teller Machines.
- Several smaller banks use an item processing module based on an in-house Burroughs BI700. The services can be either on-line or batch and include:

## BANKING SYSTEMS, INC.

- Proof of Deposit.
- Transit Processing.
- Professional services contribute 10% of BSI's total revenues. Management consulting provided includes:
  - Marketing.
  - General data processing.
  - Equipment selection.
  - Contract negotiations.
  - Turnkey systems design.

## COMPANY BACKGROUND

- Banking Systems, Inc. was founded in 1975 as a subsidiary of Optimum Systems, Inc. to provide basic application processing services for banks.
- BSI is in the process of developing a software product which will allow interactive processing by banks with a standalone minicomputer.
  - The system will be operational on a Tandem minicomputer, although management has not decided if it will be offered as a turnkey system.
  - The following applications will be available on the mini:
    - Telephone bill paying.
    - Teller balancing and control.
    - Customer information file.
    - Inquiries.
    - Memo-post.
    - POS.
    - Signature display.
    - Bank credit and debit cards.
- BSI management claims the new system will be available by the fourth quarter of 1979 or in the first quarter of 1980.
- Ten major ("Top 200") banks from all over the U.S. are participating in the research and development of the minicomputer system.
- BSI stated they had no product literature to send at this time.

BANKING SYSTEMS, INC.

### IMPACT ON CITITRAN

- There is no doubt that the BSI mini system is directly competitive with the CITITRAN approach. At this time BSI intends only to license the software and not offer a turnkey system. However, if BSI elects to joint venture the system with, say, EDS, then the system would become directly competitive.



**BAYBANKS DATA SERVICES, INC.**  
235 Wyman Street  
Waltham, MA 02154  
(617) 890-2700

President: George M. Schmeck, Jr.  
Ownership: Subsidiary of BayBanks,  
Inc.  
Revenues: \$7 million (1978)  
Employees: 210

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## PROFILE

- Banking Industry Revenues
  - \$6.3 million (90% of total revenues).
  
- Type Of Banking Services

- Processing services		95%
Interactive	(20%)	
Batch services	(80%)	
- Software products		<u>5%</u>
		100%
  
- Banking Industry Specialization
  - Commercial banks.
  
- Major Clients
  - Affiliated banks of BayBank, Inc.
  - Broadway National Bank of Chelsea.
  - Calumet National Bank.
  - Dairy Bank and Trust Company.
  - Middleborough Trust Company.
  
- Major Competitors
  - First National Bank of Boston.
  - Florida Software Services, Inc.
  - National Calumet Bank of Boston.
  - University Computing Company.
  
- Sales Offices
  - Headquarters location.

## BAYBANKS DATA SERVICES, INC.

- Employees

- Marketing	5
- Customer service	20
- Computer operations	100
- Administrative	10
- Technical support	<u>75</u>
Total personnel	210

- Geographic Concentration

- Processing services are available only in Massachusetts and New Hampshire.
- Software products are marketed throughout the U.S.

- Data Center Locations

- Cambridge, MA.
- Dedham, MA.
- Springfield, MA.
- Waltham, MA.

- Computer Hardware

- Waltham data center:
  - One IBM System/370 Model 145.
  - One IBM System/370 Model 158.
  - One DEC PDP-11 front-end.
  - DOS/VS operating system.

## BANKING PRODUCTS AND SERVICES

- BayBanks Data Services (BDS) offers 11 banking applications on its processing service. These are:
  - Account Reconciliation.
  - Automated Clearing House Processing.
  - Bond Appraisal System.
  - Commercial Loan.
  - Consolidated Statement Accounting System.

## BAYBANKS DATA SERVICES, INC.

- Installment Loan.
  - Mortgage Loan.
  - Payroll
  - Proof of Deposit.
  - Savings.
  - Trust Accounting.
- Processing is performed in batch mode; on-line inquiry and file maintenance is available. Leased, multidrop lines connect 250 branch offices to the four regional data centers. Fees are calculated on a unit and transaction basis. At present, 35 banks use this service.
  - BDS processing services are available only in the states of Massachusetts and New Hampshire.
  - BDS offers four software products to commercial banks. They are:
    - Consolidated Statement Accounting System: a system combining checking, Negotiable Order Withdrawals (NOW), savings, clubs, and overdraft statements. The package includes account titles.
      - BDS offers two versions of the package, DOS licensing at \$44,000 and OS at \$54,000. No maintenance is available.
      - To date approximately 19 packages have been licensed.
    - Installment Loan Accounting System: a system providing bank, branch, ledger, officer, and loan type controls, a summary of the user's portfolio, a transaction history for each file, and a wide selection of reports.
      - The package licenses for \$22,000; maintenance is not available. Approximately nine packages have been licensed.
    - An optional Dealer Accounting module is available which extends the system to provide processing, control, and reporting for both retail and wholesale businesses. The module licenses for an additional \$6,000.
    - Proof of Deposit (POD 80) System: a system writing all forms of input in a single procedure. MICR, card, tape, ACH, commercial customer, and Federal Reserve Bank inputs are accepted.
      - The package licenses for \$35,000; maintenance is not available. Approximately 18 packages have been licensed.
    - An optional on-line reject/reenter module licensing at \$8,000 is also available.
      - Automated Clearing House System: performs receiving and originating functions according to National Automated Clearing House Association (NACHA) specification. The packages licenses at \$4,000; maintenance is not available.

## BAYBANKS DATA SERVICES, INC.

- All BDS software runs on IBM 360/370 machines under DOS or DOS/VS. Programs are written in COBOL.

## COMPANY BACKGROUND

- BayBanks Data Services was organized in 1961 as a wholly owned subsidiary by BayBanks, Inc. to serve its 30 Massachusetts banks. Presently, 85% of total revenues originate with banks affiliated with the parent, 10% from non-affiliated banks, and 5% from payroll services to the retail industry.
- BDS does not plan to offer any new applications this year. Efforts will be concentrated in consolidating all processing in their headquarters data center.
- Most of the software used on the BDS processing service was purchased from University Computing Company, a subsidiary of WYLY Corporation.

## IMPACT ON CITITRAN

- BDS is a captive bank processing subsidiary that also sells software. In its region, it is competitive to CITITRAN.

**BRADFORD NATIONAL CORPORATION**  
2 Broadway  
New York, NY 1004  
(212) 480-1600

President: Peter Del Col  
Ownership: Public  
Revenues: \$120 million (1978)  
Employees: 3,700

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## PROFILE

- Banking Industry Revenues

- \$91 million (75% of total revenues).

- Type Of Banking Services

- Processing services		100%
. Trust services (RCS)	(20%)	
. Securities clearance services (RCS and batch)	(25%)	
. Corporate and mutual fund shareholder services (RCS and batch)	(40%)	
. Systems and Facilities services (FM)	(15%)	
		<hr/> 100%

- Banking Industry Specialization

- Bank trust departments.
- Corporate treasury departments (shareholder records).
- Mutual fund dealers.
- Securities brokers.
- Municipal bond dealers.

- Major Clients

- Three thousand clients among which:
  - . Seventy banks for personal trust services.
  - . Four hundred banks including Chase Manhattan Bank for stock transfer services.
- Forty financial institutions for municipal bond clearance.
  - . Eighty-eight mutual funds and municipal bond trusts.
  - . Forty-two banks for securities deposit.

- Major Competitors

- SEI Corporation in personal trust.
- Sun Information Systems in corporate trust.

## BRADFORD NATIONAL CORPORATION

- Sales Offices

- New York, NY.
- Boston, MA.
- Chicago, IL.
- Kansas City, MO.
- Sarasota, FL.
- Dallas, TX.
- Los Angeles, CA.

- Employees

- Total personnel 3,700			
Supporting financial services	(75%)		2,800
Supporting systems and facilities services	(25%)		900
	Trust Services	Securities Clearance	Corporate Mutual Fund
Marketing	50	80	70
Customer support	70	110	140
Operations	360	410	770
Administrative	<u>220</u>	<u>240</u>	<u>280</u>
Totals	700	840	1,260

- Geographic Concentration

- Bradford has 3,000 clients nationwide; the majority of clients are concentrated in the New York/Boston/Washington corridor.

- Data Center Locations

- Bradford runs a nationwide network of data centers, The hub is at Teaneck, New Jersey, with regional centers in major cities including Boston, New York, Pittsburgh, San Francisco, and Los Angeles.

- Computer Hardware

- IBM 370/168, 370/158 in regional centers.

## BANKING PRODUCTS AND SERVICES

- On-line personal trust systems (RCS services or as a software product).
  - Clearance services - both direct and private label.
  - Stock transfer services - both direct and private label.

## BRADFORD NATIONAL CORPORATION

- Custody services - both direct and through depository trust company.
- Bradford Electronic Securities Transaction (BEST) systems link trading with movement and custody.
- Fixed Income Accounting Service (FIAS) links national municipal bond settlement system with Bradford's back office accounting services.

### COMPANY BACKGROUND

- Bradford was founded in 1968. Revenues have grown from \$11.5 million in 1970 to \$120 million in 1978.
- The company has evolved in three interrelated directions:
  - A computer systems design, facilities management and software company.
  - A fully - chartered, special purpose trust company.
  - A financial record keeping and information management company.
- Bradford has grown through both internal effort as well as external acquisitions and joint ventures with major banks.
  - Bankers Trust, Mellon Bank, and Crocker National are joint ventures.
  - With its trust company, Bradford can operate like a commercial bank without being subject to the Bank Company Holding Act of 1956.

### IMPACT ON CITITRAN

- Bradford National is not a competitor to CITITRAN at this time. Bradford thus far has carefully kept away from the commercial side of banking, probably to avoid being involved in litigation from the Bank Company Holding Act. Bradford is developing a nationwide computer communications network. Once in place, the network will be useful for funds as well as securities clearance. Bradford may then edge into the commercial side and either through RCS services or through facilities management (FM), compete with CITITRAN.





**BURROUGHS CORPORATION**  
Burroughs Place  
Detroit, MI 48232

Chief Executive Officer:  
Paul S. Mirabito  
Ownership: Public - NYSE  
Revenues: \$2.5 billion (1978)  
Employees: 56,000

---

## PROFILE

- Banking Industry Revenues

- \$600 million (INPUT estimate).

- Type Of Banking Services

- Burroughs offers a comprehensive set of mainframes, peripherals, and MICR processing system for all size banks 50%
- Software system for standard consumer banking applications 10
- A complete line of modular teller, administrative data entry, MICR processing and consumer inquiry terminals to support banking operations 40
- 100%

- Banking Industry Specialization

- Burroughs considers the financial sector a primary market. Banking and finance represent an estimated 24% of total worldwide revenues.

- Major Clients

- Harris Trust Company.
- First National Bank of Detroit.
- Huntington National Bank, Columbus.

- Major Competitors

- IBM.
- NCR.

- Sales Offices

- More than 1,000 sales offices worldwide.
- Business Machines - 390 offices.
- International Group - 401 offices.
- Office Products - 300 offices.
- Federal and Special Systems - 20 offices.

## BURROUGHS CORPORATION

- Employees

- Business machines	16,000	
- International	16,000	
- Other products	5,000	
- Federal systems	2,000	
- Computer systems	3,500	
- Small systems	4,800	
- Peripheral products	3,000	
- Terminal systems	2,500	
- Components	2,500	
	<hr/>	
	56,000	Worldwide

- Geographic Concentration

- Worldwide.

- Data Center Locations

- Burroughs does not operate any data centers for correspondent banking or other computer services processing.

- Computer Hardware

- Burroughs has a wide range of processing systems for retail banking operations for all size banks:
  - B80 - 800 for small banks.
  - B1800 - 2800 medium banks.
  - B3800 - 4800 large banks.
  - B6800 - 7800 very large banks.

## BANKING PRODUCTS AND SERVICES

- The Burroughs S1000 - 3000 Series equipment is well oriented toward gathering and proofing MICR data at the source, and can be located at the branch level.
- With their Computer Management System (CMS), and integrated hardware/software approach, Burroughs can offer program compatibility across a wide range of systems for small to large size banks.
- Burroughs is heavily committed to DDP with CMS on the B80 and B810. Burroughs has a minicomputer that can handle branch teller, administrative, and ATM operations.

## BURROUGHS CORPORATION

- Burroughs can be expected to offer, by 1980, a bank branch control system that will tie all branch operations into a branch mini.

### COMPANY BACKGROUND

- Burroughs Corporation is deeply entrenched in the financial marketplace.
- The company currently has 30% of the installed mainframes in small to medium size banks, and is the only serious contender to IBM in large and very large size banks.
- Burroughs revenues are growing at an AAGR of 16%, rising from \$1.01 billion in 1976 to \$2.5 billion in 1978.

### IMPACT ON CITITRAN

- Burroughs is a direct competitor to CITITRAN. They currently hold a 30% share of installed mainframes in small to medium size banks, the primary market of interest to CITITRAN. While Burroughs may not be able to induce many banks to go in-house, they will be difficult to dislodge from banks currently using Burroughs systems.
- Replacement of Burroughs installed systems was not considered viable in INPUTS' analysis of the market potential for CITITRAN.



**BUSINESS EDP SERVICES, INC.**  
1450 Lake Bradford Road  
Tallahassee, FL 32301  
(904) 576-7197

President: David Murphy  
Ownership: Private  
Revenues: \$900,000 (1978)  
Employees: 23

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## PROFILE

- Banking Industry Revenues
  - \$475,000 (65% of total revenues).
- Type Of Banking Services
  - Software products 100%
- Banking Industry Specialization
  - Commercial banks.
- Major Clients
  - Company would not provide.
- Major Competitors
  - Company would not provide.
- Sales Offices
  - Headquarters location.
  - San Antonio, Texas.
  - Santa Monica, California.
  - Wilton, Connecticut.
- Employees

- Marketing	7
- Software services	12
- Administrative	4
	<hr style="width: 100%;"/>
	23
- Geographic Concentration
  - Atlantic and Pacific coast states.

## BUSINESS EDP SERVICES, INC.

### PRODUCTS AND SERVICES

- Business EDP Services offers four software packages to companies using Burroughs medium sized computers. These are:
  - CHAMP, Communication Handler for Automatic Multiple Programs: controls multiple application programs using the same memory space, performs all message switching and queuing, provides system audit, restart, and recovery procedures.
    - Operates on Burroughs computers with a minimum 15 kb of memory.
    - CHAMP was developed in 1973. Price of the package starts at \$5,000.
  - PRO, an on-line programming system. Allows a programmer to write, document, and proof a program interactively. PRO eliminates manual coding, running, and debugging of programs. The package price starts at \$6,500.
  - LIOML, Library On-line Tape Management System:
    - Provides on-line inquiry and record update.
    - Monitors tape movement and location.
    - Offers audit trailing and hard-copy reports.
    - Operates on Burroughs B2500 - B4800 computers with Lear Siegler ADM-2 or Burroughs TD800 terminals.
    - Price of the product starts at \$7,500.
  - WIN, an interactive word processing system costing from \$15,000 including hardware.

### COMPANY BACKGROUND

- Business EDP Services is a privately held firm incorporated in 1973 in Florida. They have developed four software packages which they market in the large financial centers of the United States. Though their software is utility in nature, Business EDP has had greatest success in selling to banking institutions. Sales to banks now represent 65% of total revenues.

### IMPACT ON CITITRAN

- None.

CACI, INC.  
1815 North Fort Myer Drive  
Arlington, VA 22209  
(703) 841-7800

President: Dr. William Fain  
Ownership: Public  
Revenues: \$12,414,546 FYE 6/30/78  
Employees: 325

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## PROFILE

- Banking Industry Revenues
  - \$180,000 (1.5% of total revenues).
- Services Provided

- Software Products	7%
- Professional Services	<u>93%</u>
	100%
- Banking Industry Specialization
  - None. All products and services are applicable across industry sectors.
- Geographic Concentration
  - Products and services are sold nationwide and in Europe. Eighty-five percent of sales are U.S., with some concentration in the Southeast, and 15% are from Europe.

## PRODUCTS/SERVICES

- The following software packages are offered for general business and specialty applications:
  - SIMSCRIPT 11.5: modelling language.
  - CACI-SYMAP: mapping system.
  - QWICK QUERY SYSTEM: reporting generation/data analysis.
  - II SYSTEM: report generator and monitor.
  - SITE: census data for business site location.
- The CACI respondent singled out SITE as particularly useful for banks in site location, but declined to state the number sold to banks or to identify major clients. SITE is available on several service bureaus and is also sold as a package. Price of the product ranges from \$20,000 to \$50,000.

March 1979

INPUT

## COMPANY BACKGROUND

- o CACI, Inc. was incorporated in 1962 as California Analysis Centers, Inc. by former Rand Corporation founders of the SIMSCRIPT language. Its name was subsequently shortened to CACI, Inc.
- o CACI provides research analysis, management consulting, systems design and software development to more than 200 users in the public and private sectors.

## IMPACT ON CITITRAN

- o CACI is a general purpose systems design and programming house focused on applying certain packaged software products, notably SIMSCRIPT, to the solution of customer problems. They are fundamentally a contract programming services shop and offer no direct competition to CITITRAN. However, through their consulting services, CACI could influence the purchasing decisions of CITITRAN prospects.



**CENTRAL NATIONAL BANK  
OF CLEVELAND**

800 Superior Avenue  
Cleveland, OH 44114  
(216) 861-7800

President: Charles S. Lawrence  
Ownership: Subsidiary of Centron  
Bancshares Corporation  
Assets: \$2 billion (1978)  
Employees: 2,000

---

**PROFILE**

● Banking Industry Revenues

- \$1 million (Revenues received from banks not affiliated with Centron Bancshares Corporation).

● Type of Banking Services

- Processing services		100%
Remote batch	(60%)	
Batch	(40%)	
		<hr/>
		100%

● Banking Industry Specialization

- Commercial banks.

● Major Competitors

- Main competition comes from banks developing their own in-house processing services.

● Sales Offices

- Headquarters location.

● Employees

- Total data processing employees		42
. Marketing	3	
. Customer support	11	
. Operations	28	

● Geographic Concentration

- Ohio, Pennsylvania, Indiana, and Michigan.

● Data Center Locations

- Winston-Salem, North Carolina.

## CENTRAL NATIONAL BANK OF CLEVELAND

- o Computer Hardware
  - IBM 370/168.
  - IBM 370/158.
  - NCR Century 300.

### BANKING PRODUCTS AND SERVICES

- o Central National Bank of Cleveland offers non-affiliated banks the standard applications they use to provide processing services to their own 52 branches. These applications are:
  - Demand Deposit Accounting.
  - Savings.
  - Installment Loans.
  - Mortgage Loans.
  - Commercial Loans.
  - Overdraft Loans.
  - Certificate of Deposit.
  - CIF.
  - Memo Posting (PROFIT).
- o Ten non-affiliated banks now use these services and no new clients are anticipated.
- o Revenues derived from these services to banks non-affiliated with the parent, represent 50% of their total revenues received from outside sources.

### COMPANY BACKGROUND

- o Central National Bank of Cleveland is a major bank, with 52 branches in the North Central region of the United States. Demand Deposit Accounting was first offered as a service in 1963; the other applications have been developed and offered to other banks since then.
- o Located close to large industrial centers, Central National also provides payroll, general ledger, accounts payable, and accounts receivable processing services to the manufacturing industry. Limited medical applications are also available. These additional services provide the remaining 50% of revenues received from outside sources.
- o Central National Bank of Cleveland is a subsidiary of Centron Bancshares Corporation, a bank holding company.

## CENTRAL NATIONAL BANK OF CLEVELAND

IMPACT ON CITITRAN

- The EDP department of this bank also provides processing services to local correspondents. INPUT has the impression that these services are offered as part of the package provided to correspondents. The bank has no plans to expand the activity.



CINCOM SYSTEMS, INC.  
2300 Montana Avenue  
Cincinnati, OH 45211  
(513) 662-2300

President: Thomas N. Nies  
Ownership: Private  
Revenues: \$24 million Fiscal Year  
End 9/78  
Employees: 484

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## PROFILE

- Banking Industry Revenues

- \$492,000 (2% of total revenues).

- Type Of Banking Services

- Software products 95%
- Professional services 5%

- Banking Industry Specialization

- Commercial banks.
- Savings and loan institutions.

- Major Clients

- Bank of America.
- Charter Bank of London.
- Chase Manhattan.
- Gibraltar National Savings and Loan.
- Citibank.
- Federal Home Loan Bank.
- First National Bank.
- Transamerica Corporation.

- Major Competitors

- IBM.
- Software ag of North America, Inc.
- Cullinane Corporation.

- Sales Offices

- Twenty-six offices, including Atlanta, Dallas, Denver, Detroit, Grand Rapids, Houston, Burbank, Philadelphia, New York, Pittsburgh, San Francisco, and Seattle.

- Employees

- Total employees 484. No further breakdown was available.

## CINCOM SYSTEMS, INC.

- Geographic Concentration
  - East, Midwest and West.
- Computer Hardware
  - One IBM System/370 Model 158.
  - DOS operating system.

## BANKING PRODUCTS AND SERVICES

- Cincom systems provides its banking clients with any or all of five software system packages. These are:
  - TOTAL, Cincom's first product, was first offered in 1969 and now has over 2,000 installations. It is a comprehensive data base management system which allows development of on-line or batch applications Banking clients generally have to convert their applications to use with TOTAL.
    - The company does have ties with other vendors and suggest use of other systems such as National Sharedata's SOLIS system to interface with TOTAL.
    - It is anticipated that Cincom will move into the development of specific financial applications.
    - TOTAL is available on IBM hardware, IBM plug-compatible, NCR, Honeywell, Harris, Varian and DEC. Its monthly rental price ranges from \$475 to \$1,300.
  - Cincom also markets ENVIRON/1, an on-line telecommunications package. It is designed to operate in conjunction with IBM System/360 Model 25 and up hardware.
  - SOCRATES, a generalized extract and reporting system has a purchase price of \$20,750 for DOS and \$22,500 for OS. It may be leased for \$675 or \$750 per month depending on whether a DOS or OS operating system is used.
  - TASK presents the user with on-line information retrieval capabilities for TOTAL database files. It can be leased for either \$475 or \$525 a month, or purchased for \$19,000 or \$21,000, depending on whether DOS or OS is required. It is available on IBM System/360 and 370 with DOS or OS operating systems.
    - TASK has just been introduced and will allow for integrated systems management in a distributed database environment.

## CINCOM SYSTEMS, INC.

### COMPANY BACKGROUND

- Cincom Systems, Inc. was founded in 1968. It is now an international company with offices in Europe, Japan, Australia and South America.
- The company claims a 60% share of the installed independent database management system market. It is, in fact, the industry leader in the number of data base management systems installed.
- Facilitating this growth has been the company's rental concept of software. A client can now acquire a software product for a monthly charge instead of having large capital outlays. Two-thirds of the company's income is generated from rental contracts.
- The company is able to invest profits in several research and development programs. Cincom is concentrating on extending its vertical and horizontal markets. Developments are under way to offer specialized application packages for financial, manufacturing and government sectors. Development of manufacturing applications seem to be receiving the most emphasis at the present time.

### IMPACT ON CITITRAN

- CINCOM is the leading independent supplier of Data Base Management system software. Its package, TOTAL, claims more installations than IMS. It is not a competitor to CITITRAN.





CISCO, INCORPORATED  
810 Thompson Building  
Tulsa, OK 74103  
(918) 583-5791

President: William C. Lake  
Ownership: Subsidiary of First  
National Bank of Georgia  
Revenues: \$4,816,000 (1978)  
Employees: 350

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## PROFILE

- Banking Industry Revenues
  - \$3,974,000 (83% of total revenues).
  - \$843,000 or 22% of banking revenue comes from banks not affiliated with the parent company.
  
- Type of Banking Services

- Processing services		100%
- Batch services	(100%)	_____
		100%
  
- Banking Industry Specialization
  - Commercial banks.
  
- Major Clients
  - First National Bank of Atlanta.
  - Harris Trust, Chicago.
  - Bank of the Southwest, Houston.
  
- Major Competitors
  - The company was not aware of any major competitor in the specific services they offer.
  
- Sales Offices
  - Headquarters location.
  - San Francisco.
  - Atlanta.

## CISCO, INCORPORATED

- Employees

- Tulsa headquarters and data center	180
- Atlanta data center	90
- San Francisco data center	<u>80</u>
Total employees	350

- Geographic Concentration

- Atlantic States of New York, New Jersey, Pennsylvania, Delaware, Florida, Georgia, Maryland, Virginia, West Virginia, and the Carolinas.
- Central States of Illinois, Indiana, Michigan, Ohio, Texas, Oklahoma.
- Pacific States of California, Oregon, Washington.

- Data Center Locations

- San Francisco, Atlanta and Tulsa.

- Computer Hardware

- Four DEC PDP-11/70s.
- Three REI optical scanners.
- Three Entrex System 480s.
- All data centers use an RSX-11D operating environment.

## BANKING PRODUCTS AND SERVICES

- CISCO, Incorporated performs credit card receipt processing to banks and retail distributors.
- Seventy-eight percent of banking revenues (\$3.131 million) is derived from the parent company's processing needs; the remaining 22% (\$843,000) is derived from their 25 non-affiliated bank clients.
- The majority of CISCO's credit card processing comes from Visa and Master-charge accounts.
- Thirty percent of their employees perform clerical tasks of data processing.

## CISCO, INCORPORATED

### COMPANY BACKGROUND

- CISCO, Incorporated was incorporated in Oklahoma in 1969 as a private firm. Since its inception, the primary service provided by CISCO has been credit card processing. The company's first data center was opened in Tulsa in 1969. Additional data centers were opened in Atlanta (1974) and in San Francisco (1975).
- First National Bank of Atlanta purchased CISCO in January 1978. CISCO now operates as a wholly owned subsidiary and derives 78% of their total banking revenues from the parent company.
- All of the processing services provided by CISCO are handled in batch mode.

### IMPACT ON CITITRAN

- CISCO is another of the bank owned subsidiaries providing back office processing for members of the First National Bank of Georgia Group. As such, they are captive to the banking group and are unlikely to be displaced by CITITRAN. They could, however, be a conduit for CITITRAN in an "OEM" context.



**CITIZENS AUTOMATED SERVICES**

100 South Central Plaza  
Canton, OH 44702  
(216) 452-9966

President: Richard G. Gilbert  
Ownership: Division of Citizens  
Savings Association  
Revenues: \$635 million (1978)  
Employees: 1500

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**PROFILE**

● Banking Industry Revenues

- \$600,000 (100% of computer services revenues).

● Type Of Banking Services

- Processing services Interactive 60%
- Software products 40  
100%

● Banking Industry Specialization

- Commercial banks, credit unions, savings and loan.

● Major Clients

- Century Federal Savings.
- Citizens Savings Association.
- First Federal Savings of Washington.
- People's Federal Savings and Loan.
- Wayne Savings and Loan.

● Major Competitors

- Broadview Savings and Loan.
- Champion Services Corporation.
- Florida Software Services, Inc.

● Sales Offices

- Headquarters location.

## CITIZENS AUTOMATED SERVICES

- Employees

-	Total bank personnel	1500
-	Total computer division personnel	30
.	Marketing	4
.	Customer support	20
.	Administrative	6

- Geographic Concentration

- Processing services are available only within 200 miles of Canton, Ohio; software is marketed throughout the U.S.

- Data Center Locations

- Headquarters location.

- Computer Hardware

- IBM System/370 Model 148.
- DOS/VS operating system.

## BANKING PRODUCTS AND SERVICES

- Citizens Automated Services (CAS) has developed an on-line financial system called the Canton System. Developed in 1963 and enhanced in 1970 and 1977, the Canton System performs the following functions:
  - Savings: passbooks, statement accounts, premium accounts, clubs, KEOUGH/IRA, and certificates of deposit.
  - Loans: mortgage, construction, collateral, improvement, college, and consumer loan accounting.
  - Other: safe deposit boxes, third party collections, pre-authorized transactions, vendor name and address, and general ledger.
- The Canton System has a data base management system, UFAM, which handles variable length, variable format, and variable content records. It has both random and sequential access and update capability. The system includes software for report and microfiche generation.

## CITIZENS AUTOMATED SERVICES

- The basic system including data base cost \$60,000; 38 packages have been sold to date. Additional modules available at an additional cost of \$15,000 each are:
  - Expanded Savings: provides additional options and subsystems such as ACH input tape processing, CRT masking for name and address maintenance, and special management reporting.
  - Expanded Loans: provides additional options and subsystems including escrow analysis, interest on escrow, and ACH tape preparation for pre-authorized loan payments.
  - Customer Information: contains additional calling, conversation, maintenance, and processing programs to reconcile and coordinate customer information.
- All software operates on IBM System/360 Model 30 and IBM System/370 Model 115 and larger machines under DOS, DOS/VS, or OS. Programs are written in ANS COBOL and Basic Assembly Language (BAL).
- CAS aims their software marketing at institutions with assets between \$100 million and \$2 billion.
- CAS also provides the Canton System on a processing network. Available only within 200 miles of Canton, Ohio, nine clients now use this service. Data is transmitted via 1200 baud leased-lines. Though CAS has been approached by institutions out of the Ohio area, they have refused to expand their network services.

## COMPANY BACKGROUND

- Citizens Automated Services was formed as a division of Citizens Savings Association in 1963 to market the Canton System, previously called the Instantaneous Totality System. Developed initially for in-house use, CAS now sells the package as a software product and makes it available on their network service.
- CAS plans to add a NOW (Negotiable Order Withdrawal) module next year. They feel they are not competitive in states which allow NOW transactions without this addition.

## IMPACT ON CITITRAN

- CAS is essentially a captive savings and loan processing operation, providing services to other (than parent) savings and loan organizations in a limited geographic region. No impact on CITITRAN.





**COLLATERAL INVESTMENT COMPANY**  
2100 First Avenue North  
Birmingham, AL 35203  
(205) 252-1000

President: W. T. Ratliff  
Ownership: Private  
Revenues: \$12.6 million (1978)  
(INPUT estimate)  
Employees: 300

---

## PROFILE

- Banking Industry Revenues
  - \$250,000 (.02% of total revenues) (INPUT estimate).
- Type Of Banking Services
  - Software packages 100%
- Banking Industry Specialization
  - Commercial banks 100%
- Major Clients
  - Company would not provide.
- Major Competitors
  - The company stated that their only competition is with banks who develop their own packages.
- Sales Offices
  - Headquarters locations.
- Employees

- Marketing	44
- Software	50
- Computer operations	6
- Administrative	<u>200</u>
Total corporate personnel	300
- Geographic Concentration
  - Throughout the U.S. and in Puerto Rico.

## COLLATERAL INVESTMENT COMPANY

### BANKING PRODUCTS AND SERVICES

- Collateral Investment Company markets the Mortgage Bankers Servicing Package (MBSP) which consists of 150 individual programs. Sale of this package accounts for almost all of their computer services revenues.
- The MBSP package runs on an IBM System/360 Model 30 with a minimum 65K memory and is written in Basic Assembly Language (BAL). Applications performed are:
  - Investor accounting.
  - Mortgage posting.
  - Escrow analysis.
  - Amortization schedules.
  - Delinquent notices.
  - Portfolio analysis.
  - Sales and production reports.
- Collateral has sold 50 of the mortgage servicing packages to date. Price of the package is \$10,000 for the off-line version and \$15,000 for the on-line version.
- Collateral also markets a general ledger system for \$2,500. This product, Mortgage Bankers General Ledger, has not made any significant contribution to their total computer services revenues.

### COMPANY BACKGROUND

- Collateral Investment Company was established in Alabama in 1933 as a mortgage banking firm. The Mortgage Bankers Servicing Package and Mortgage Bankers General Ledger were originally developed for in-house use. Efforts to market the products to other institutions began in 1968. Sales of these packages represent less than one percent of total revenues.
- Collateral does not actively market their software products; no product literature is available.

### IMPACT ON CITITRAN

- CIC is not competitive to CITITRAN, nor is it likely to be. It's mortgage banking package, however, may be worth considering as an add-on feature to CITITRAN and should be considered as a possible acquisition.

COMPUSERVE, INC.  
5000 Arlington Center Blvd.  
Columbus, OH 43200  
(614) 457-8600

President: Jeffrey Wilkins  
Ownership: Public (OTC)  
Revenues: \$15,835,214, (1978)  
Employees: 250

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## PROFILE

- Banking Industry Revenues

- \$3.2 million (20% of total revenues).

- Type of Banking Services

- Processing services 100%
- Interactive (100%) 100%

- Banking Industry Specialization

- Commercial banks.

- Major Clients

- Central National Bank of Cleveland.
- Chemical Bank.
- Crocker Bank.
- First National Bank of Dallas.
- Republic of Texas.
- Security Pacific Bank.
- Texas Commerce Bank.
- Wells Fargo Bank.

- Major Competitors

- Comshare, Inc.
- General Electric Information Services.
- National CSS, Inc.
- Rapidata, Inc.
- Service Bureau Company.
- Tymshare, Inc.

- Sales Offices

- Akron, Atlanta, Chicago, Cincinnati, Cleveland, Columbus, Dallas, Dayton, Detroit, Houston, Indianapolis, Los Angeles, Louisville, Memphis, New York, Palo Alto, Philadelphia, Pittsburgh, San Francisco, Stamford, St. Louis, Tucson, Washington, DC.

## COMPUSERVE, INC.

- Employees

- Marketing	120
- Customer support	25
- Computer operations	75
- Administrative	<u>30</u>
Total personnel	250

- Geographic Concentration

- East and West Coast financial areas.

- Data Center Locations

- Headquarters location.

- Computer Hardware

- Eleven DEC PDP-10s.
- Two DEC PDP-20s.
- One DEC PDP-15.
- One DEC PDP-11 network processor.

## BANKING PRODUCTS AND SERVICES

- CompuServe, Inc. offers four applications to the financial industry on their interactive processing services:
  - Bond Portfolio Management System (BPMS) provides information for current market yield, concessions, book value, market value, gain or loss, and market price. Summary valuation reports can be selected for bond type, transaction type, maturity month, maturity year, state of issue, and Moody's ratings.
  - Bond Reporting System:
    - Bond Bid System computes optimal bond bids, examines bid alternatives, evaluates competition.
    - Bond Quote System generates daily price quotation sheets and accesses 350 securities of the federal government and its agencies.
    - Bond Spread System provides computerized arbitrage strategy for government securities.

## COMPUSERVE INC.

- . Bond Swap System proposes bond swaps advantageous to the user.
  - . Bond Trade System provides profit evaluation for any proposed combination of federal and municipal bonds.
  - Federal Funds System provides a method for tracking the users reserve position through daily/weekly balance reports, interest reports, and confirmation reports.
  - Money Market System handles money market instruments including federal funds, federal reserve borrowing, certificates of deposit, treasury bills, etc.
- These combined offerings, called the Banking Management Services, are designed to aid banks in increasing their yields on municipal, government, and agency bonds.
  - Data is transmitted via a leased-line network connecting 27 cities; Tymnet is also used. Presently, 175 clients use these services.
  - CompuServe also offers the Kent Data System for econometric forecasting and the CUFFS financial forecasting system.

## COMPANY BACKGROUND

- CompuServe, Inc. was incorporated as Compu-Serve Network, a wholly owned subsidiary of Ilex Corporation, Ohio, in June 1969. Initially, the company provided contract programming and interactive data processing services on its Columbus, Ohio computer. In 1975 Compu-Serve Network went public, changed the name to CompuServe, Inc., and separated from Ilex. Contract programming services are no longer provided with the exception of applications development work in conjunction with network services.
- CompuServe markets their services very aggressively with nearly 50% of total employees involved in sales.
- In addition to banking applications (20% of total revenues), CompuServe offers general business (55%), scientific (5%), and specialty manufacturing (20%) applications.
- CompuServe management is not currently planning any new offerings to the financial industry.

COMPUSERVE, INC.

#### IMPACT ON CITITRAN

- CompuServe is a well-known mid-size DEC based time-sharing company that would be a plausible acquisition if integrated with Citibank's DEC based Interactive Computer Center. The company does not and will not compete with CITITRAN functions.

COMPUTEL SYSTEMS, INC.  
1300 NW 36th Street  
Miami, FL 33142  
(305) 633-2626

President: R. F. Haley  
Ownership: Subsidiary of Computel  
Systems Ltd.  
Revenues: \$2 million (estimate)  
Fiscal Year End 12/78  
Employees: 72

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## PROFILE

- Banking Industry Revenues

- \$1.6 million (estimate) (80% of total revenues).

- Type Of Banking Services

- Processing services 95%
- Professional services 5

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100%

- Banking Industry Specialization

- Commercial banks.
- Credit unions.

- Major Clients

- Capital Bank.
- Royal Trust Bank.
- First National Bank.

- Major Competitors

- South East Bank.

- Sales Offices

- Miami, FL.

- Employees

- Marketing and general administrative 7
- Sales 3
- Software services and customer support 17
- Computer operations 45

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Total employees 72

## COMPUTEL SYSTEMS, INC.

- Geographic Concentration
  - South West Florida: Major concentration is in Dade and Broward counties.
- Data Center Locations
  - Miami, FL.
- Computer Hardware
  - Two Burroughs B4700's, MCP operating system.
  - Six BD 486 disk drives; two BD 34 reader/sorters; six BD 93 tape drives; three documentation printers; two BI24 card readers; two TD 800 console display units and 400 terminals including TV 500's, TT 102's, TD 700's, TC 3,500's, and TV 1800's.

## BANKING PRODUCTS AND SERVICES

- Computel specializes in providing on-line banking and financial related processing services. Analysis of the computer services offered indicates that 95% of revenues are derived from processing services with the balance from professional services.
- The company provides remote computing offered in interactive mode and also provides batch services.
  - Specific applications which are provided to 15 major banks and three credit unions include: Demand Deposit Accounts, Time Deposit Accounts, Installment Loans, Commercial Loans, Mortgage Loans, and an Automated Teller machine system.
  - In addition, Computel provides its clients with general ledger and financial management and mortgage administration systems. The two general ledger systems were developed by Florida Software and Management Science America.
- Monthly expenditures for an average client ranges from \$2,000 to \$15,000 depending on the size of operation.
- Remote computing is typically offered via leased lines. The company uses the network definition language of Burroughs for its teleprocessing software.
- As a secondary business, Computel offers clients professional services.



## COMPUTEL SYSTEMS, INC.

### COMPANY BACKGROUND

- The company was founded in 1975 as a subsidiary of Computel Systems Ltd., Toronto, Canada. It has been offering services to the banking industry since its formation.
- In 1978 Computel Systems, Inc. derived an estimated 80% of its total revenues from the banking industry. It is anticipated that 1979 revenues for this sector will be in excess of \$2.5 million.
- Computel is considering extending its services to include point-of-sale applications, bill paying accounting, remote item processing and making its ATM (Automated Teller Machine) accessible to more clients.

### IMPACT ON CITITRAN

- Computel is a Florida regional bank processor, offering DDA and related services. It is owned by one of the larger Canadian service firms. Within its limited region, it is a competitor to CITITRAN.



COMPUTER ASSOCIATES  
655 Madison Avenue  
New York, NY 10021  
(212) 355-3333

President: Charles Wang  
Ownership: Private  
Revenues: \$12 million 1978  
(World-wide)  
Employees: 160 (World-wide)

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## PROFILE

- Banking Industry Revenues
  - \$180,000 World-wide (10% of total revenues).
- Services Provided
  - Software products 100%
- Banking Industry Specialization
  - None.
- Major Clients
  - Central National Bank of Cleveland.
  - American National Bank and Trust.
  - Banque National de Paris.
  - Chartered Bank of London
  - Citibank.
  - Northwestern Bank.
  - Midland Bank.
- Major Competitors
  - Software Design for the tape management packages.
  - Pansophic for the report-writing packages.
- Sales Offices
  - Eleven regional offices through-out the United States.
  - Offices in England, Italy, Germany, Holland, Belgium, Switzerland and Australia.
- Employees
  - Marketing 56
  - Software services 90
  - Administrative 34
  - Worldwide personnel (all services) 160

- Geographic Concentration
  - Products are marketed throughout the United States, Canada, Europe and Australia.
- Data Center Locations
  - None.
  - A research center is maintained in Danbury, Connecticut.
- Computer Hardware
  - One IBM 370/135.

## PRODUCTS AND SERVICES

- Computer Associates does not offer any application software specifically written for banks. The company offers system software packages which enhance and replace IBM software and markets these to all industry sectors. Of the 5,000 packages sold since 1972, an estimated 750 have been to banks.
- Computer Associates offers nine packages. These are:
  - CA - SORT
    - Sort package for IBM 360/370 machines.
    - Available for DOS, OS, and their VS counterparts.
    - Priced from \$3,900.
  - CA - DYNAM/D
    - Disk space and catalog management software system for IBM 360/370 machines.
    - Available for DOS, OS, and VS counterparts.
    - Priced from \$4,900.
  - CA - DYNAM/T
    - Tape library control system to manage the tape library for IBM machines.
    - Available for DOS only.
    - Priced from \$5,900.
  - CA - DYNAM/FT
    - File independence facility for DOS/VS IBM users.
  - CA - EARL
    - Report writer package using a specialized command language for IBM equipment.
    - Available for DOS, OS, and VS.
    - Priced from \$4,500.
  - CA - MAINT
    - Batch and on-line library maintenance software systems for IBM 360/370 machines.
    - Available for DOS and DOS/VS.

- CA-JASPER+
  - . Collects job accounting data and generates job accounting, performance evaluation, and billing reports for IBM machines.
  - . Available for DOS and DOS/VS.
  - . Priced from \$6,000.
- CA - SYMDATA
  - . Test data generator for IBM machines.
  - . Available for DOS, OS, and their VS counterparts.
- CA - IDOS/VS
  - . Allows DOS/VS and CMS environments to exist concurrently in the same machine.
  - . Used for DOS/VS environments.

## COMPANY BACKGROUND

- Computer Associates was founded in 1971. They maintain offices in the United States, Belgium, Germany, Italy, Netherlands, Switzerland, United Kingdom, and Australia. One hundred percent of their business is from software sales.
- Forty-two percent their total revenues are derived from the United States, the remainder comes from international sales.

## IMPACT ON CITITRAN

- Computer Associates is a systems software house offering generalized systems packages designed to run on IBM hardware. It is not a competitor of CITITRAN.



**COMPUTER DYNAMICS, INC.**

100 Hegenberger Road  
Oakland, CA 94621  
(415) 635-5800

President: Robert Smith  
Ownership: Subsidiary of Central  
Banking Systems, Inc.  
Revenues: \$7.4 million (estimate)  
Fiscal Year End 12/78  
Employees: 200

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**PROFILE**

● Banking Industry Revenues

- \$7.03 million (95% of total revenues).

● Type Of Banking Services

- Processing services 85%
- Software products 15%

● Banking Industry Specialization

- Credit unions.
- Commercial banks.

● Major Clients

- Affiliate banks of Central Banking System, Inc. and approximately 35 credit unions in the Bay area. The company did not supply specific names.

● Major Competitors

- Company would not provide.

● Sales Offices

- Oakland, California.

● Employees

- Systems support 50
- Computer operations 100
- General/Administrative 50
- Total employees 200

## COMPUTER DYNAMICS, INC.

- Geographic Concentration

- Northern California with a concentration in the San Francisco Bay Area.

- Data Center Locations

- Oakland, California.

- Computer Hardware

- One IBM System/360 Model 65 with OS, and 18 tape and 2 disk drives.

## BANKING PRODUCTS AND SERVICES

- Computer Dynamics, Inc. derived an estimated 95% (\$7.03 million) of its total revenues from the banking industry in 1978. Of this amount, \$5.6 million is captive to its parent company, Central Banking System, Inc., Oakland. The company was unable to predict anticipated growth from this sector for 1979.

- The company provides its banking and credit union clients with processing services delivered in interactive, remote batch and batch modes.

- Specific financial applications provided on a time and usage basis include:

- Demand Deposit Accounts.
- Savings Accounts.
- Mortgage Loans.
- Installment Loans.
- Insurance Premium financing.
- Lease Accounting.
- General Ledger.

- The company provides remote computing services via leased lines and dial-up facilities. The network serves an estimated six cities in Northern California. Teleprocessing is strictly through HASP (Houston Automatic Spooling Program), to the service bureau in Oakland.

## COMPANY BACKGROUND

- Computer Dynamics, Inc. was founded in 1967. In 1973 it became a subsidiary of the Oakland based Central Banking System, Inc, a bank holding company.



## COMPUTER DYNAMICS, INC.

- The company provides its parent organization with several proprietary software products which are not offered on the open market.
- Revenues are also generated through services for both the medical and distribution industry sectors.
- Computer Dynamics will supplement its processing services with management consulting where appropriate, such as with its share draft speciality for credit unions. Professional services per se are not considered to be revenue producers.
- The company does not have any sales personnel who are concentrating exclusively in the banking industry.

## IMPACT ON CITITRAN

- CDI is basically a software development firm specializing in banks. As such, it is not competitive to CITITRAN. The company could be considered as a software source, however.



**COMPUTER MANAGEMENT, INC.**  
1100 Keith Building  
Cleveland, OH 44114  
(216) 579-0080

President: David Ludwick  
Ownership: Private  
Revenues: \$4.5 million (1978)  
Employees: 125

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## PROFILE

- Banking Industry Revenues
  - \$750,000 (17% of total revenues).
- Type Of Banking Services
  - Software products 100%
- Banking Industry Specialization
  - Commercial banks.
- Major Clients
  - Hartford National Bank.
  - Maryland National Bank.
  - National City Bank of Cleveland.
  - Omaha National Bank.
- Major Competitors
  - Bob White Computing Corporation.
  - Florida Software Company.
  - University Computing Company.
  - Weiland Computer Corporation.
- Sales Offices
  - Headquarters location.
- Employees
  - Systems division 50
  - Data services division 10
  - Financial services division 16
  - Computer output microfilm division 49
  - Total personnel 125

## COMPUTER MANAGEMENT, INC.

- Geographic Concentration

- Illinois, Indiana, Michigan, New York, New Jersey, Ohio, Pennsylvania.

- Data Center Locations

- Headquarters location.

- Computer Hardware

- One IBM System/360 Model 30.
- One IBM System/360 Model 40.
- DOS operating system.

## BANKING PRODUCTS AND SERVICES

- Computer Management, Inc. (CMI) offers four software packages to its banking clients. They are:

- Customer Information Management System (CIFM):
  - Provides the capability to create and maintain an on-line data base of customer and account information.
  - Gives on-line access via person's name, number, or alternate name. CIFM also has a built-in data base manager, UFAM, which provides high data independence, video and audio access, and a transaction journal.
  - Operates on IBM 360/370 equipment under OS, OS/VS, DOS or DOS/VS. Base price is \$40,000, maintenance is \$4,000 including enhancements. Seventeen have been sold to date.
- Customer Oriented Electronics Funds Transfer System (COEFTS):
  - Provides on-line remote authorization for checking account deposits and withdrawals, savings account deposits and withdrawals, fund transfers among accounts, and loan payments for point-of-sale (POS) terminals and automated teller machines (ATM).
  - Supports on-line multiple branch processing, file balance, foreign EFT, transaction formatting, and settlement subsystems.
  - COEFTS was designed to be integrated with the CIFM package.
  - Operates on IBM 360/370 equipment under OS, OS/VS, DOS, or DOS/VS and is written in COBOL. Base price is \$50,000, maintenance is \$5,000 including enhancements. Three have been sold to date.

## COMPUTER MANAGEMENT, INC.

- Demand Deposit Accounting and Information System (DDAIS):
  - . The Bank Control Module includes flexible report selection, service charge method selection, overdraft checking options, float options, and account activity controls.
  - . The Bank Control File Module controls dollar flow and provides input to an integrated financial control system or general ledger.
  - . The Bank Set Table Module allows the user to process other banks in groups, individually, or in a combination.
  - . DDAIS system uses the UFAM data base manager and provides both EFT and ACH processing. It operates on IBM 360/370 machines under OS, OS/VS, DOS, DOS/VS and is written in COBOL. Base price is \$50,000, maintenance is \$15,000 including enhancements. Six packages have been sold to date.
- Money Manager Combined Descriptive Statement System:
  - . Provides a single statement containing all accounts and transactions of each customer. Statements are listed by account, date of transaction, and serial order.
  - . Provides descriptive print-out for EFT, ACH, ATM, or POS transactions.
  - . MONEY MANAGER was designed to be integrated with the CIFM package.
  - . Operates on IBM 360/370 equipment under OS, OS/VS, DOS, or DOS/VS and is written in COBOL. Base price is \$15,000, maintenance is \$1,500 including enhancements. Seven have been sold to date.

## COMPANY BACKGROUND

- Computer Management, Inc. was incorporated in 1969 in Ohio to provide processing and professional services in the Great Lakes area. In 1977 CMI purchased the rights to market software packages developed by National City Bank of Cleveland. CMI will also begin marketing these to credit unions in 1979.
- The four packages are designed to enhance the computer operations of a financial institution. The packages are not available on CMI's processing service.
- CMI markets the CIFM and MONEY MANAGER packages to banks in the \$150-250 million range. DDAIS is marketed to banks over \$350 million in size; COEFTS is marketed to any size institution.

## COMPUTER MANAGEMENT, INC.

- In addition to financial services, CMI provides general business processing to the manufacturing and distribution industries, and COM services to all industries. Approximately 50% of CMI's revenues are derived from processing services, 17% from the sale of software packages, and 33% from consulting services.

## IMPACT ON CITITRAN

- As a software vendor, Computer Management, Inc. is not a direct competitor to CITITRAN. However, CMI competes indirectly to the extent that when a bank buys CMI software products for in-house use, it will not buy computer services.

**COMPUTER POWER, INC.**  
661 Riverside Avenue  
Jacksonville, FL 32204  
(904) 358-1424

President: David M. Hicks  
Ownership: Private  
Revenues: \$8 million (1978)  
Employees: 125

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## PROFILE

- Banking Industry Revenues
  - \$8 million (100% of total revenues).
- Type Of Banking Services

- Processing services	60%
Remote computing	
Interactive	
Remote batch	
- Software products	25%
- Professional services	<u>15%</u>
	100%
- Banking Industry Specialization
  - Commercial banks, savings and loan.
- Major Clients
  - Bank of America.
  - Chase Manhattan.
  - City Bank of Columbus.
  - National Bank of Detroit.
  - First National Bank of Chicago.
  - Michigan National Bank.
  - Security National Bank.
  - Valley National Bank of Arizona.
- Major Competitors
  - American Automated Services of Atlanta.
  - Banks developing in-house computer services.
- Sales Offices
  - Headquarters location.

## COMPUTER POWER, INC.

- Employees

- Marketing	1
- Software support	25
- Customer support	25
- Computer operations	65
- Administrative	<u>9</u>
Total personnel	125

- Geographic Concentration

- None. Products and services are used throughout the U.S.

- Data Center Locations

- Headquarters location.

- Computer Hardware

- One Amdahl 470/V6 mainframe.

## BANKING PRODUCTS AND SERVICES

- Computer Power, Inc. (CPI) has developed four software packages for the financial industry. They are available by direct sale or on the CPI processing service. Products provided are:

- Mortgage Servicing Package:
  - Loan administration management.
  - Investor accounting: cashiering, investor reporting, loan transfer, and new loan set-up.
  - Customer services: collections and foreclosures, escrow analysis, hazard insurance, life insurance, payoffs and assumptions, and property taxes.
  - The mortgage package operates in batch mode with an on-line inquiry capability. It consists of over 1,000 modules and runs on IBM 360/370 hardware under DOS, DOS/VS, OS, or OS/VS. The DOS version costs from \$120,000, the OS from \$150,000. Sixty-five packages have been sold to date.
- Construction Loan Management Package:
  - Report generator giving current condition and make-up of a construction loan portfolio.



## COMPUTER POWER, INC.

- . Analysis system judging profitability of lending activities by type and location.
- . Available with late charge and participant payable subsystems.
- . Construction loan operates in batch mode on IBM 360/370 machines under DOS, DOS/VS, OS, or OS/VS. The DOS version costs \$20,000, the OS \$25,000. The package is only available after 24 months continuous use on the CPI processing service. Eight packages have been sold to date.
- Residential Loan Inventory Control Package:
  - . Reports loan origination, volume, and profitability.
  - . Breaks down business source by the week, month, and year to date.
  - . Tracks pipeline loans from application date to closing.
  - . Maintains individual loan ledgers.
  - . Provides weekly reports of drafts or checks issued, cleared, and outstanding.
  - . Residential loan operates in batch mode with an on-line inquiry capability and runs on IBM 360/370 machines under OS, OS/VS, DOS, or DOS/VS. Purchase price is \$25,000.
- General Ledger:
  - . Produces monthly and quarterly general ledger reports.
  - . Provides monthly statements relating income to budget for the current period and the year-to-date.
  - . Includes automatic balancing procedures with error messages.
  - . Performs account reconciliations.
  - . G/L operates in batch mode on IBM 360/370 machines under OS, OS/VS, DOS, or DOS/VS. Purchase price is \$10,000 after 12 months of continuous usage on the CPI processing service.
- Seventy-six banks throughout the country now use the CPI processing service; eighteen have Raytheon ETS 1200 minicomputers for on-line inquiry.

## COMPANY BACKGROUND

- Computer Power was incorporated in 1969 in Florida to provide software sales and processing services to banks and mortgage institutions.
- CPI concentrates marketing efforts on very large institutions. Their 76 clients now service 2.5 million loans totaling \$67.8 billion.

COMPUTER POWER, INC.

#### IMPACT ON CITITRAN

- Computer Power, Inc. (CPI) is a specialist in mortgage loan servicing. As such they are only marginally competitive with CITITRAN. Their services and software products are used by large bank loan departments and mortgage bankers; markets not particularly interesting to CITITRAN.

**COMPUTER RESEARCH COMPANY**  
 200 North Michigan Avenue  
 Chicago, IL 60601  
 (312) 977-7500

President: Ronald L. Ellis  
 Ownership: Private  
 Revenues: \$6 million Fiscal Year  
 End 12/78 (estimate)  
 Employees: 55

## PROFILE

- Banking Industry Revenues
  - \$3 million (50% of total revenues) (INPUT estimate).
- Type Of Banking Services
  - Processing services 100%
- Banking Industry Specialization
  - Commercial banks.
- Major Clients
  - Company would not provide.
- Major Competitors
  - University Computing Company.
- Sales Offices
  - Corporate headquarters.
- Employees

- Marketing sales	7
- Software services/systems support	11
- Computer operations	30
- General and administrative	<u>7</u>
Total employees	55
- Geographic Concentration
  - The company derives 85% of its total revenues from Illinois, Indiana, Michigan, and Wisconsin.

## COMPUTER RESEARCH COMPANY

- Data Center Locations
  - Chicago, Illinois.
- Computer Hardware
  - One IBM 3033 with a MVS operating system and one IBM System/371 Model 155 with a MVT operating system.

## BANKING PRODUCTS AND SERVICES

- Computer Research Company (CRC) provides remote computing, batch services, and Facilities Management to over 500 clients of whom more than half are banks and financial institutions. It is estimated that over \$3 million was derived from this sector in 1978. With the introduction of its new Central Information File a growth of 35% in banking revenues is anticipated for 1979.
- CRC's new data bank service was introduced three months ago and has five clients to date. Clients are charged a fee according to activity and volume of data. The range could be from \$1,000 to \$6,000 per month. The service includes on-line Central Information File processing, ATM support, point of sale terminals and EFT. The software was acquired from Bob White Computing and Software Company.
- The company considers this on-line bank processing service to have no major competitor. The closest contenders would be University Computing Company and Automatic Data Processing.
- It is anticipated that clients initially will be drawn from the Chicago area, South Carolina, Tennessee and Georgia.

## COMPANY BACKGROUND

- Computer Research was founded in 1969. The company claims to have a 60% market share for remote computing and facilities management services in the Chicago metropolitan area.
- Remote computing services generates 75%, batch services 15% and facilities management 10% of total revenues.
- CRC's network clients are offered CICS and TSO software. Remote computing is offered via leased lines, WATS lines, and TELENET.

## COMPUTER RESEARCH COMPANY

- Approximately 250 clients use general business applications on their network which includes accounts payable, general ledger, and accounts receivable. These products were purchased from Management Science America.

## IMPACT ON CITITRAN

- CRC is a regional processor just entering the bank market. It could be an interesting acquisition prospect. Impact on CITITRAN to-date is minimal.



**COMPUTER SCIENCES CORPORATION**  
650 N. Sepulveda Blvd.  
El Segundo, CA 90245  
(213) 678-0311

President: William R. Hoover  
Ownership: Public (NYSE)  
Revenues: \$343,202,000 (1979)  
Employees: 8,500

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## PROFILE

- Banking Industry Revenues

- \$3.4 million (1% of total revenues). (INPUT estimate).

- Type Of Banking Services

- Processing services 60%
- Interactive computing
- Professional services 40
- 100%

- Banking Industry Specialization

- Commercial banks, savings and loan, credit unions.

- Major Clients

- Chase Manhattan Bank.
- Chemical Bank.

- Major Competitors

- Automatic Data Processing, Inc.
- Electronic Data Systems Corporation.
- General Electric Information Services.
- National CSS, Inc.
- National Sharedata Corporation.
- Systematics, Inc.
- Tymshare, Inc.

- Sales Offices

- U.S.: Atlanta, Baltimore, Boston, Chicago, Cincinnati, Cleveland, Cranford, Dallas, Denver, Detroit, Hackensack, Houston, Los Angeles, Miami, Milwaukee, Mountain View, New York, Philadelphia, Pittsburgh, Portland, Richmond, San Diego, San Francisco, Santa Ana, Seattle, Silver Spring, Washington, White Plains.
- International offices are maintained in: Australia, Belgium, Canada, France, Spain, South Africa, Netherlands, United Kingdom and West Germany.

## COMPUTER SCIENCES CORPORATION

- Employees

- Total company personnel 8,500
- Total Commercial Division personnel 700
- No further breakdown was available.

- Geographic Concentration

- None. Products and services are marketed throughout the world.

- Data Center Locations

- El Segundo, CA.
- Oakbrook, IL.
- Washington, DC.

- Computer Hardware

- Eleven Univac 1108/1110 processors.
- Operating system: customized CSC teleprocessing system (CSTS).

## BANKING PRODUCTS AND SERVICES

- Computer Sciences Corporation offers both consulting and remote computing services to its banking clients. Computing services are performed by the Data Services Division on the INFONET network. INFONET specializes in providing planning and control, data management statistical analysis, and general business applications. General consulting speciality includes systems consulting, systems design, and contract programming.

- Applications used by the banking industry on INFONET include:

- FLARES (Financial Language for Analysis and Reporting System): designed to simplify spreadsheet operations by providing modeling and simulation. FLARES contains a library of over 40 applications known as FIPACK. Some of the available routines include:
  - BKDEP: Calculates, period-by-period, total depreciation for a set of partially expensed assets, using straight-line or declining balance.
  - CAPTX: Calculates, period-by-period, total depreciation for a set of assets, using straight-line, sum of year digits, or declining balance.



## COMPUTER SCIENCES CORPORATION

- . DEPR: Sets up a depreciation schedule for a single asset, using straight-line, sum of years digits, or declining balance.
  - . ERR: Calculates the external rate of return for a series of expected future cash outflows and inflows, using an expected rate for reinvestment.
  - . IRR: Calculates the internal rate of return for a single investment followed by a series of cash flows.
  - . NPV: Calculates the net present value of a series of expected future cash flows discounted at a specified rate.
  - . LOAN: Calculates interest payments and reduction of principal for a commercial loan or line of credit.
  - . MORT: Calculates a mortgage loan schedule for a partially or fully amortized loan.
  - FIPABS (Financial Planning and Budgeting System): prepares and consolidates performance reports. FIPABS provides simulations and offers sensitivity, risk, and depreciation analysis.
  - ALADIN (A Language for Decision Information): creates, defines, maintains, and queries a data base. It can also be accessed from COBOL, FORTRAN, or Assembly Language. Both standard and custom reports are generated.
  - MANAGE: builds and retrieves information from multiple data bases already developed on the ALADIN data management system. Ease of use makes it a good application for interbranch and bank-wide systems.
  - DIADEM: provided by CSC's subsidiary Economic Models Ltd., contains multiyear forecasts and models for the U.S., European, and Japanese economies. Models for major industrial markets such as automotive, energy, and chemicals are provided. Data is derived from production, income, employment, savings, and price indices.
  - DISTAT: analyzes time series statistical and econometric data. It performs econometric research and planning computations ranging from trend analysis to economic model building.
- INFONET presently has approximately 100 financial industry clients. They transmit data to and from CSC data centers on a combination of WATS, TELEX, and satellite circuits.
  - In 1971 the Commercial Division of CSC acquired the demand deposit, savings, mortgage loan, customer information file, and stock transfer packages from the First National Bank of Denver. After extensive modification, CSC began marketing efforts. Very few packages were ever sold. Packages that were installed were generally associated with facilities management (FM) contracts. During the early 70's CSC won FM contracts with Manufacturers Bank in Los Angeles, American National in Moorestown, and American National in Lansing. These contracts are no longer in effect and the only banking FM contract INPUT believes CSC currently has is with Zion National in Salt Lake.

## COMPUTER SCIENCES CORPORATION

- CSC's lack of success in the software package sales market resulted in their decision to cease marketing activity. The products are still available from CSC but are not actively supported.
- The banking software products are:
  - Central Information File.
  - Funds Transfer.
  - Demand Deposit Accounting.
  - Financial Accounting and Control.
  - Corporate Trust.
  - Savings.
  - Time Certificates of Deposit.
  - Commercial Loan.
  - Mortgage Loan.
  - Charge-off Loan.
  - Installment Loan.
  - Student Loan.

## COMPANY BACKGROUND

- Computer Sciences Corporation (CSC) was founded in 1959 as a Nevada corporation to provide systems software and consulting. It has since expanded its professional (contract) services to include systems engineering and development, communications engineering, facilities management, and offers remote data processing services through its INFONET network.
- Revenues in fiscal 1979, showed an 24% gain to \$343.2 million. Pre-tax income rose only 8% to \$28.3 million in 1979, and net earnings were \$14.2 million. All major sectors of CSC's activities and markets contributed to the 1979 growth except the international market, where revenue declined due to the loss of Iranian contracts.
- Since 1978, CSC has embarked on an acquisition program for its new data services group. The acquisitions in 1978 were:
  - Economic Models Limited (London, England), and economic consulting firm acquired in February 1978. It developed DIADEM, an on-line economic forecasting and information system.
  - The name and commercial claims processing portion of PAID Prescriptions, Inc. (Burlingame, California). PAID processes prescriptions for medical plans, insurance companies, labor unions, and self-insured organizations. Annual sales exceeded \$5 million when it was acquired in February 1978.

## COMPUTER SCIENCES CORPORATION

- CMS Industries, headquartered in City of Commerce, CA has just recently been acquired (May 1979). CMS had 1978 revenues of approximately \$3 million and specializes in providing processing services to the distribution industry.

## IMPACT ON CITITRAN

- CSC is the third largest computer services company. Through its Infonet Division, it offers a broad range of services via RCS to all industries. Although CSC cannot be considered a specialist banking firm, it does enough business in banking to draw potential revenues from CITITRAN.



COMPUTER SERVICE CORPORATION  
23255 Northwestern Highway  
Southfield, MI 48057  
(313) 358-3852

President: Richard Wright  
Ownership: 83% owned by Anacomp  
Revenues: \$4,500,000\* FYE 4/30/78  
Employees: 120

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## PROFILE

- Banking Industry Revenues

- \$2,225,000\* (50% of total company revenues).

- Type of Banking Service

- Processing Service
    - Remote Computing 90%
    - Remote Batch
    - Batch Services 10
- 100%

- Banking Industry Specialization

- Credit Unions.

- Major Clients

- Detroit Teachers Credit Union (57,000 members) and 36 other credit unions.

- Major Competitors

- Computer Services would not provide.

- Sales Offices

- Headquarters location.

- Employees

- Marketing 4
- General & Administrative 96
- Software Services 10
- Operations 10

\* INPUT estimate

March 1979

INPUT

- Geographic Concentration
  - Michigan and Indiana.
- Data Center Location
  - Headquarters.
- Computer Hardware
  - One IBM 360/40 and one IBM 360/50.

## BANKING PRODUCTS/SERVICES

- Major credit union applications available on their network:
  - Savings
  - Share Draft
  - Mortgages
  - Loans
- Other general applications relating to credit unions are available, however, the company declined to provide detailed information.

## COMPANY BACKGROUND

- Computer Services Corporation has been offering services to credit unions for the past 8 years. Revenues from users range from one hundred to several thousand dollars per month. The company does not concentrate marketing effort towards any particular size of credit union.
- Within 6 months Computer Services will be providing interactive processing services to credit unions. The company expects to derive 20% of revenues in 1979 from interactive processing, 70% from remote batch and the remaining 10% from batch processing.
- Anacomp, Inc. acquired 83% ownership of Computer Services in September 1978.
- Fifty percent of Computer Services revenues are derived from other business sectors. One major account is FTD Florists.

## IMPACT ON CITITRAN

- Computer Service Corporation specializes in credit unions. Of themselves, they pose no threat to CITITRAN. However, they are now controlled by ANACOMP, one of the faster growing computer services firms. If Anacomp should ultimately decide to focus on the banking industry, this company integrated with other Anacomp acquisitions could develop into a serious competitor.





**COMPUTER TASK GROUP, INC.**  
800 Delaware Avenue  
Buffalo, NY 14209  
(716) 882-8000

President: Randolph A. Marks  
Ownership: Public OTC  
Revenues: \$14.2 million Fiscal Year  
End 12/78  
Computer Services Revenues:  
\$10.7 million  
Employees: 454

---

## PROFILE

- Banking Industry Revenues

- \$1.44 million (13.4% of total computer services revenues).

- Type Of Banking Services

- Professional services 100%

- Banking Industry Specialization

- Commercial banks.

- Major Clients

- Marine Midland Bank.
- Maryland National Bank.
- Mellon Bank.

- Major Competitors

- Company would not provide.

- Sales Offices

- Sales for all professional services, including the banking industry, are organized on a territorial basis to correspond with the branch office locations at Buffalo, Rochester, Syracuse, New York City, Chicago, Baltimore, and Philadelphia.

- Employees

- |                  |           |
|------------------|-----------|
| - Management     | 43        |
| - Marketing      | 18        |
| - Technical      | 345       |
| - Administrative | <u>48</u> |
| Total employees  | 454       |

## COMPUTER TASK GROUP, INC.

- Geographic Concentration
  - Middle Atlantic and East North central regions.
- Data Center Locations
  - Buffalo, NY.
- Computer Hardware
  - One IBM System/370 Model 145 with OS.

## BANKING PRODUCTS AND SERVICES

- In 1978 Computer Task Group, Inc. derived 13.4% of its total computer services revenues from the banking industry. The company anticipates a 30% growth in revenues for this sector in 1979.
- The company provides professional services to the banking industry and derives 5% of its revenues from management consulting, 10% from systems consulting, 25% from systems design, and 60% from contract programming.
- Applications developed for the banking industry include: demand deposit, trust, and loan systems.
- Computer Task Group, Inc. is beginning to offer, on a selective basis, a software products called ATLAS. ATLAS is a teleprocessing loans authorization system. The package was originally developed by the company of an independent client. The company has now acquired the right to market the product. ATLAS will operate in an on-line mode using IBM hardware.

## COMPANY BACKGROUND

- Computer Task Group, Inc. was formed in 1966 as a partnership and has been offering services to the banking industry since its inception.
- Marketing efforts are aimed at the banking and discrete manufacturing industries.

## COMPUTER TASK GROUP, INC.

- The primary revenue produced for the company is the operation of a batch service bureau which serves 400 companies. The range of services include: payroll, accounts receivable, inventory, and a contribution system.
- Computer Task Group, Inc. has installed 125 Basic 4 minicomputers at users locations for general business applications.

## IMPACT ON CITITRAN

- CTG is basically a professional services firm and, as such, consults with banks for software system design, etc. on occasion. The company is known to be looking for acquisitions and it is conceivable they could be CITITRAN competitors if it acquires a banking specialty company.



## COMPUTER USAGE COMPANY

141 Battery Street  
San Francisco, CA 94111  
(415) 543-3940

President: Victor Bartoletti  
Ownership: Public (OTC)  
Revenues: \$9,929,201, (1978)  
Employees: 175

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### PROFILE

- Banking Industry Revenues
  - \$2.5 million (25% of total revenues) (INPUT estimate).
- Type Of Banking Services
  - Turnkey systems 100%
- Banking Industry Specialization
  - Commercial banks.
- Major Clients
  - American Security Bank.
  - Bankers Trust.
  - Citibank.
  - First City National Bank.
  - First National Bank of Atlanta.
  - Manufacturers Hanover Trust.
  - Philadelphia National Bank.
  - United Virginia Bank.
  - Wachovia Bank and Trust.
- Major Competitors
  - IBM.
- Sales Offices
  - Atlanta, GA.
  - Boston, MA.
  - Chicago, IL.
  - Clifton, NJ.
  - Los Angeles, CA.
  - New York, NY.
  - Newport Beach, CA.
  - San Francisco, CA.
  - Sunnyvale, CA.

## COMPUTER USAGE COMPANY

- Employees

- Total personnel 175
- No further breakdown was available.

- Geographic Concentration

- None. Products are marketed throughout the U.S.

- Data Center Locations

- Sunnyvale, CA.

- Computer Hardware

- One Amdahl System/470 Model V6 operating in MVT.

## BANKING PRODUCTS AND SERVICES

- Computer Usage Company (CUC) offers turnkey systems to large banking institutions. Applications include:

- Collections.
- Domestic funds transfer.
- International payments.
- Letter of credit.
- Money desk.

- CUC software, CUC specialized operating systems, and Quantel computers are combined to form these systems. Quantel provides the hardware maintenance.

- CUC was very reluctant to discuss their turnkey offerings. They would neither approve nor refuse our request for product literature. It is unlikely that any literature will be available.

## COMPANY BACKGROUND

- Computer Usage Company (CUC) was founded in 1955 as a Delaware corporation to provide applications software, systems software, and contract programming. CUC now has two divisions:

## COMPUTER USAGE COMPANY

- Product Marketing Division: markets turnkey systems. Clients include 150 banks and 250 agribusiness customers. This division contributes 54% of total company revenues.
- Utility Division: provides remote computing services. Their 300 clients are spread over many industries and situated mainly in the San Francisco Bay Area. This division contributes 46% of total company revenues.
- Marketing efforts are directed at the top 50 banks, seed mills, and seed lots in the U.S.
- CUC's Product Marketing Division offers three systems to the agricultural industry. A DEC PDP-11 minicomputer, combined with a specialized CUC operating system, provides:
  - Grain accounting system.
  - Least cost feed formulation.
  - Economic models for feed lots.
- Systems cost from \$80,000 to \$120,000 depending on individual customization.
- CUC reported losses in 1976 and 1977 due to a substantial decrease in facilities management revenues, a decrease in interest income, increased interest expenses, and a loss on the sale of their subsidiary CUC of Indiana, Inc. 1978 net income was \$240,380 compared to losses of \$854,820 in 1977 and \$446,321 in 1976.

## IMPACT ON CITITRAN

- As a turnkey system provider it is conceivable that CUC might ultimately bring out a CITITRAN type of product. This is highly unlikely in INPUT's view, however. The company provides a mish-mash of different systems and services and does not appear to have a well thought out long term strategy.





CULLINANE CORPORATION  
20 William Street  
Wellesley, MA 02181  
(617) 237-6600

President: John J. Cullinane  
Ownership: Public  
Revenues: \$8,920,545 (1978)  
Employees: 200

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## PROFILE

- Banking Industry Revenues

- \$2.7 million (30% of total revenues).

- Type Of Banking Services

- Software products 97%
- Professional services 3
- 100%

- Banking Industry Specialization

- Commercial banks, savings and loan.

- Major Clients

- Bank of America.
- Central National Bank of Cleveland.
- Chase Manhattan Bank.
- Chemical Bank.
- Crocker Bank.
- Federal Reserve Bank of Chicago.
- Home Federal Savings and Loan.
- Wells Fargo Bank.

- Major Competitors

- Cincom Systems, Inc.
- IBM.
- MRI Systems Corporation.
- Software AG of North America, Inc.

- Sales Offices

- Atlanta, Cincinnati, Houston, Los Angeles, Philadelphia, Seattle, St. Louis, Toronto, Tulsa.
- Cullinane has representatives spread throughout 40 countries in Europe, South America, and Australia.

## CULLINANE CORPORATION

- Employees

-	Marketing	50
-	Software services	105
-	Administrative	<u>45</u>
	Total personnel	200

- Geographic Concentration

- None. Products are marketed throughout the U.S. and in Europe, Australia, and South America.

- Computer Hardware

- An Intel AS6 is on order.

## BANKING PRODUCTS AND SERVICES

- Cullinane Corporation has three software systems used heavily by the banking industry. They are:
  - IDMS for Banks: an integrated database management system modified for banking requirements. The system includes a language to describe the physical and logical database (DDL), a data manipulation language (DML), compilers for COBOL, PL/I, and FORTRAN, and a data base manager providing record storage and control, as well as space management, security, back-up, and recovery functions. Virtually all telecommunication monitor systems are compatible with IDMS for banks.
    - IDMS runs on IBM System/360, IBM System/370 and Univac series 70 machines under OS, OS/VS, DOS, DOS/VS, TDOS, or VMOS. It is the only package of its kind written to CODASYL specifications.
  - IDMS for Banks includes two special features:
    - IDMS Sequential Processing Facility, allowing storage and maintenance of records in both sequential and logical order. The sequential file facilities are designed to speed and simplify the large file processing requirements typical of bank environments.
    - IDMS RDAM Bride, permits the direct use of all Univeristy Computing Corporation's (UCC) banking application packages without any conversion or rewriting. OS, DOS, or DOS/VS versions are furnished as part of the IDMS for Banks package.
  - IDMS for Banks is available for license, lease, or rental. A onetime license costs \$50,000 plus a \$5,000 per year renewal and maintenance fee. Cullinane developed the package in 1973 and has licensed approximately 125 packages to date.

## CULLINANE CORPORATION

- EDP-AUDITOR: provides a library of 50 routines, allowing the auditor to access either database or conventional files and to automatically perform common audit procedures. The auditor can choose the type and format of reports to be generated.
  - EDP-AUDITOR runs on IBM System/360, IBM System/370, and Univac 70 machines under OS, DOS, DOS/VS, VMOS, or TDOS.
  - EDP-AUDITOR is available only on a license basis. The one-time license fee is \$15,000 plus an annual \$2,000 renewal and maintenance fee.
  - EDP-AUDITOR/3 performs the same functions as the EDP-AUDITOR but is designed for IBM System/3 machines.
- CARS: an auditing system similar to EDP-AUDITOR used with IDMS or similar database management systems. CARS is extremely flexible, operating on IBM, Burroughs, NCR, ICL, Honeywell, Univac or any other ANS COBOL compatible machines.
  - Depending upon the hardware used, CARS licenses for between \$8,500 and \$15,000 plus an annual renewal fee of from \$1,500 to \$2,000.

## COMPANY BACKGROUND

- Cullinane Corporation was founded in 1968 in Massachusetts to provide integrated information systems. In 1977 Cullinane acquired Computer Audit Systems, Inc. and their CARS audit package. Cullinane now has offices throughout the U.S., Europe, South America, and Australia. Their four subsidiaries are:
  - Cullinane Audit System, Inc., West Orange, New Jersey.
  - Cullinane Benelux, Brussels, Belgium.
  - Cullinane do Brasil, Limitada, Rio de Janeiro, Brazil
  - Interactive Systems Corporation, Palo Alto, California.
- Cullinane revenues for fiscal year ending 4/30/78 increased 68% over the previous year, to \$8,920,545. Net profit increased 108% to \$1,043,810.
- Cullinane presently has licensed over 2,000 packages installed in 900 sites worldwide. Other products include on-line text editing, distributed data processing software for PDP-11 minicomputers, and on-line query facilities.

## IMPACT ON CITITRAN

- Cullinane is a leading independent supplier of data base management and other systems software. The company recently went public at one of the largest multiples to be seen in recent year. The company is not competitive to CITITRAN. It has begun to specialize in DBMS software for small comuters and could be a software source.



DASD CORPORATION  
 9045 N. Deerwood Drive  
 Milwaukee, WI 53209  
 (414) 355-3405

President: Martin R. Marshall  
 Ownership: Private  
 Revenues: \$15.5 million 1978  
 Employees: 464

## PROFILE

- Banking Industry Revenues

- \$1.5 million (10% of total revenues).

- Services Provided

Software Products	10%
Professional Services	<u>90%</u>
	100%

- Banking Industry Specialization

- None.

- Major Competitors

- IBM.

- Sales Offices

- Twenty offices nation-wide perform sales duties especially Milwaukee, Chicago, Houston, and Philadelphia.

- Employees

- Marketing	100
- Software services	300
- Administrative	<u>64</u>
Total personnel	464

- Geographic Concentration

- Products are marketed throughout the United States and in Canada.

## BANKING PRODUCTS AND SERVICES

- DASD Corporation does not offer any products or services directly applicable to the banking industry. Their system software packages and professional and consulting services can be used by any industry sector.
- DASD markets four systems and seven conversion packages. These are:
  - VIP: Video programming tools program.
  - MAPGEN: Utility map generator program.
  - SIMBA: Record blocking program.
  - DASDCMP: file comparison and printing program.
    - Conversion packages are:  
RPG to COBOL, DOS COBOL to OS COBOL, AUTOCORDER to OS COBOL, 360/20 BAL, to 360/370 OS ALC, NEAT/3 to ANS COBOL, GE MAP to OS COBOL, and System 3 COBOL to OS COBOL.
  - DASD derives very little revenue from software sales to the banking industry. They have done extensive custom applications work for banks but declined to specify particular firms.

## COMPANY BACKGROUND

- DASD, a privately owned corporation, was incorporated in April 1974. Intending to concentrate only on professional services, the company has since expanded their services by marketing several proprietary software packages. Ninety percent of DASD total revenues, however, are still derived from custom programming. DASD plans to grow 100% in 1979, adding offices in Denver, Detroit, and New York.

## IMPACT ON CITITRAN

- DASD is essentially a contract programming house with some bank software development expertise. They are not a threat to CITITRAN.

**DATA ARCHITECTS, INC.**  
460 Totten Pond Road  
Waltham, MA 02154  
(617) 890-7730

President: Martin Cooperstein  
Ownership: Public  
Revenues: \$5.1 million (1978)  
Employees: 81

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## PROFILE

- Banking Industry Revenues

- \$1.8 million (35% of total revenues).

- Type Of Banking Services

- Professional services 100%

- Banking Industry Specialization

- Commercial banks.

- Major Clients

- First National Bank of Boston.
- Citibank, N.A.
- Crocker Bank.

- Major Competitors

- Index Systems.

- Sales Offices

- San Francisco, CA.
- New York, NY.

- Employees

- Total personnel 81

- Geographic Concentration

- Sixty percent of DAI revenues are derived from the Northeastern U.S., 30% from New York, and 10% from the remainder of the U.S., primarily California.

## DATA ARCHITECTS, INC.

### BANKING PRODUCTS AND SERVICES

- DAI provides consulting services in the areas of international banking, cash management, commercial finance and EDP planning.
- Other professional services include systems design for Electronic Funds Transfer Systems.
  - DAI developed and installed the Citibank commercial EFTS. Management considers the system a success.

### COMPANY BACKGROUND

- Data Architects, Inc. (DAI) was founded in 1967 and specializes in providing management and programming consulting services.
- Professional services revenues are derived from a variety of industries, particularly life insurance, banking, and state government.
- Since 1973 DAI has been designing customized turnkey systems, under contract. The company has installed 12 to 15 turnkey systems for banking, transportation, and law enforcement industries. DAI does not offer any standard turnkey systems.

### IMPACT ON CITITRAN

- DAI is a software/system consulting organization. It's biggest customer is CITIBANK! It is not competitive to CITITRAN, but could be a source of expertise for the system design.



**DATA COMMUNICATIONS  
CORPORATION**

3000 Directors Row  
Memphis, TN 38131  
(901) 345-3544

President: Norfleet Turner  
Ownership: Private  
Revenues: \$7.5 million (1978) (INPUT  
estimate)  
Employees: 200

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**PROFILE**

● Banking Industry Revenues

- \$1.5 million (20% of total revenues).

● Type Of Banking Services

- Software products 65%
  - Turnkey systems 35
- 100%

● Banking Industry Specialization

- Commercial banks and investment companies.

● Major Clients

- Boyle Investment Company.
- Home Mortgage Company of El Paso.

● Major Competitors

- Computer Power, Inc.
- Florida Software Services, Inc.

● Sales Offices

- Headquarters location.

● Employees

- Marketing 25
  - Customer support 40
  - Computer operations 15
  - Administrative 40
  - Professional services 80
- Total personnel 200

## DATA COMMUNICATIONS CORPORATION

- Geographic Concentration
  - None. Products and services are marketed throughout the United States.
- Data Center Locations
  - Headquarters location.
- Computer Hardware
  - One Burroughs B7700 system.
  - Two Burroughs B6700 systems.
  - One Honeywell 68/80 Multics system.
  - Data General Eclipse System/250 minicomputers.

## BANKING PRODUCTS AND SERVICES

- Data Communications Corporation (DCC) offers their Mortgage Loan Servicing System as either a software product or turnkey system. The basic package includes mortgage loan, personnel, and general ledger processing; accounts payable and accounts receivable modules are also available. The mortgage loan module provides on-line access, processing, and retrieval of an institution's portfolio. Features include warehouse reporting, cash receipts and disbursement, government subsidy, investor reporting, and escrow analysis. All loans are monitored from origination through shipment via availability, offering, reserved, committed, and shipped reports.
- As a turnkey package, the Mortgage Loan Servicing System costs \$139,000 for hardware, \$75,000 for software, and \$20,000 for installation. It includes a Data General Eclipse System/250 minicomputer with 100 to 3,200 megabytes of disk storage supporting up to 64 CRT terminals and printers. The system can be leased. Two packages have been sold since its introduction in August, 1978. DCC markets the system to institutions processing 7,000 or more loan accounts.
- As a software product, the mortgage system costs from \$75,000, additional modules are extra. Forty-seven basic packages and 25 modules have been sold to date. They operate on any model of Data General equipment.

## DATA COMMUNICATIONS CORPORATION

### COMPANY BACKGROUND

- Data Communications Corporation was organized in 1969 in Memphis, Tennessee to offer automated services to the broadcast industry. DCC is now the largest broadcast automation vendor in the U.S., offering on-line real time service for the sales, traffic, and accounting operations of over 185 television and radio stations across the U.S., Canada, and Europe. There are four other divisions:
  - Minicomputer Division: formed in 1976, offers the UNIQUE system to companies with distributed processing communications needs. It provides both standalone and terminal capability.
  - DATAFORM Division: formed in 1976, provides stock forms, envelopes, printing supplies, microfilm, and microfiche to broadcasting clients.
  - DATACOM Division: formed in 1976, provides communications facilities and services on 40,000 miles of leased lines to 125 cities world-wide. All clients are linked to the Memphis computer facility.
- Mortgage Banking Division: formed in 1978, offers a fully interactive mortgage banking system as either a turnkey system or sold as a software package.

### IMPACT ON CITITRAN

- DCC provides software and systems relating only to loan processing (specifically mortgage loans). It is not competitive to CITITRAN.



DATA GENERAL CORPORATION  
15 Turnpike Road  
Westboro, MA 01581

President: Edson D. de Castro  
Ownership: Public AMEX  
Revenues: \$380 million (1978)  
Employees: 10,800

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## PROFILE

- Banking Industry Revenues
  - \$20 million (INPUT estimate).
- Type Of Banking Services
  - Turnkey systems developed by systems houses for specialized areas such as commercial leasing 20%
  - General data entry systems for MIS and business services applications 80
  - 100%
- Banking Industry Specialization
  - Data General does not specialize in the banking industry. They sell low priced minicomputer systems for generalized applications such as accounts payable, order entry, MIS, etc.
  - Their products are sold either directly to banks for general business use, primarily data entry and MIS, or through OEM arrangements with system houses that develop specialized applications.
- Major Clients
  - Scientific and industrial companies.
  - Data General also specializes in medical applications. In 1978 their largest single customer was EMI Medical Limited, which accounted for just over 10% of net sale.
- Major Competitors
  - Digital Equipment.
  - Hewlett Packard.
- Sales Offices
  - 116 sales offices worldwide, primarily in U.S., Canada, Western Europe, and Australia.

## DATA GENERAL CORPORATION

- Employees
  - Total employees 10,800
- Geographic Concentration
  - U.S., Canada, Western Europe and Australia.
- Data Center Locations
  - None.
- Computer Hardware
  - NOVA 1200, 1800, 2, 3, and CS40 Series minicomputers priced from \$2,600 to \$64,000.
  - Eclipse System/100, System/200, C/300 Series minicomputer priced from \$11,000 to \$100,000.

## BANKING PRODUCTS AND SERVICES

- Data General is engaged in the design, manufacture and sale of small and medium size minicomputer systems primarily to the scientific and industrial community.
- Some of their products find their way into banks as general business products or as turnkey systems in specialized areas.
- INPUT knows of no use of DG systems for consumer banking operations.

## COMPANY BACKGROUND

- Data General was incorporated in 1968. Revenues have been growing at an AAGR of 45% moving from \$179 million in 1976 to over \$380 million in 1978. Data General is one of the leaders in the first tier of minicomputer vendors.

## DATA GENERAL CORPORATION

### IMPACT ON CITITRAN

- Data General, as such, is not a competitor to CITITRAN. The company concentrates marketing efforts towards supplying systems primarily to manufacturing and scientific companies. They have decided thus far not to compete with Burroughs and NCR in commercial banking.
- It is not likely that DG or a system house will make the significant investment in software to offer the Eclipse line to small banks for retail operations.





DATA PROCESSING OF THE SOUTH  
1043 Morehead Street  
Charlotte, NC 28232  
(704) 375-5100

President: A. S. Blakenship Jr.  
Ownership: Public  
Revenues: \$6 million (1978)  
Employees: 199

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## PROFILE

- Banking Industry Revenues

- \$3 million (50% of total revenues).

- Type Of Banking Services

-	Processing services		100%
	Remote computing	(40%)	
	Interactive		
	Batch services	(60%)	<u>        </u>
			100%

- Banking Industry Specialization

- Credit Unions.

- Major Clients

- Company would not provide.

- Major Competitors

- Company would not provide.

- Sales Offices

- Headquarters location.

- Employees

-	Marketing	11
-	Customer support	50
-	Computer operations	110
-	Administrative	<u>28</u>
	Total personnel	199

- Geographic Concentration

- Concentrated in North Carolina, with clients also in Delaware, Virginia, West Virginia, Maryland, South Carolina and Georgia.

## DATA PROCESSING OF THE SOUTH

- Data Center Locations
  - Headquarters location.
- Computer Hardware
  - Two Itel AS-5 mainframes; additional information was considered proprietary.

## BANKING PRODUCTS AND SERVICES

- Data Processing of the South offers on-line processing services to credit unions, including:
  - Commercial loan.
  - Installment loan.
  - Mortgage loan.
  - Savings accounts.
- Three hundred thirty-five credit unions, mostly in the North Carolina area, now use this service.

## COMPANY BACKGROUND

- Data Processing of the South (DPS) was incorporated in North Carolina in 1959 to provide processing services to the South Atlantic states.
- Fifty percent of DPS revenues are derived from processing services provided to credit unions. The remaining 50% are derived from general business applications to 320 manufacturers and distributors (30%) and a special insurance package (20%) to 200 clients.
- DPS does not now offer any bank applications and stated they do not plan to develop any in the next year.

## IMPACT ON CITITRAN

- Data Processing of the South is a well-known (its president is very active in the industry) regional services firm. The company is not competitive to CITITRAN but might be an interesting acquisition for CITIBANK, especially if credit unions become a target market.

## DATA RESOURCES, INC.

29 Hartwell Avenue  
Lexington, MA 02173  
(617) 861-0165

President: Otto Eckstein  
Ownership: Public (OTC)  
Revenues: \$31,470,700 (1978)  
Employees: 500

---

### PROFILE

- Banking Industry Revenues

- \$6.3 million (20% of total revenues).

- Type Of Banking Services

- Processing services 89%
- Data base services
- Professional services 11%
- 100%

- Banking Industry Specialization

- Commercial banks, savings and loans, and brokerages.

- Major Clients

- Thirty-five of the top Fortune 50 banks, including:
  - Bank of America.
  - Central Bank of Denver.
  - California Federal Savings and Loan.
  - Chase Manhattan Bank.
  - Citicorp.
  - Crocker Bank.
  - First Federal Savings and Loan.
  - Glendale Federal Savings.
  - Seattle First National Bank.
  - Security Pacific Bank.
  - Valley National Bank of Arizona.
  - Wells Fargo Bank.

- Major Competitors

- Chase Econometric Associates, Inc.
- Wharton E.F.A., Inc.

- Sales Offices

- Brussels, Chicago, Houston, Lexington, New York, Pittsburgh, San Francisco, Toronto, and Washington, D.C.

## DATA RESOURCES, INC.

- Employees

-	Marketing	30
-	Computer operations	85
-	Professional personnel	305
-	Administrative	<u>80</u>
	Total personnel	500

- Geographic Concentration

- California, District of Columbia, Illinois, Massachusetts, New York, Pennsylvania, and Texas.

- Data Center Locations

- Headquarters location.

- Computer Hardware

- One Burroughs B7870 MCP OS.
- Two Burroughs B7700 MCP OS.

## BANKING PRODUCTS AND SERVICES

- Data Resources, Inc. (DRI) specializes in subscription programs which provide access to macro and micro-economic models, forecasting techniques, simulation models, econometric data bases, and consulting. Seven subscription packages are now available to the banking industry. These are:
  - **Bank Planning System:** a forecasting and simulation system using the EMPIRE financial modeling language. Projections for housing starts, deposit totals, management situations, etc. can be generated. The subscription fee is dependant on other programs subscribed to by clients.
  - **Loan Growth Credit Risk:** provides loan requirements for 81 industries and thousands of companies to determine their level of risk and to set interest rates. The average annual subscription fee is \$20,000.
  - **Banking Flow of Funds Service:** analyses banking industry income statements and balance sheets to project future funds flow. The average subscription fee is \$8,000 per year.

## DATA RESOURCES, INC.

- Money and Credit Memo: a weekly memo written and distributed by DRI providing pertinent credit and money flow information. Annual subscription fee is \$3,000.
  - Country Monitoring Service: analyzes the risks and loan opportunities in lesser developed countries using Intermodal Financial Statistics and the DRI databases. Average annual subscription cost is \$8,000.
  - Securities Mutual Forecasting Service: takes into account newly issued U.S. securities and provides securities yield analysis. Average annual subscription fee is \$3,000.
  - Industry Financial Service: forecasts the profits, sales, and earnings of 81 industries based on price and earning ratios. Average annual subscription fee is \$10,000.
- DRI offers subscriptions as standard packages or will customize them to specific requirements of the client. Approximately 100 banks now use these services.
  - DRI supports many databases, including:
    - Organization for Economic Cooperation and Development.
    - International Trade Information Service.
    - International Monetary Fund Balance of Payments Yearbook.
    - Petroleum Drilling Data Bank.
    - Coal Service Data Bank.
    - Weather Services International.
    - Commodities Market Data.
    - Bank Of America Money and Credit Statistics.
    - Daily Securities Prices.
  - Data is transmitted on dial-up, leased, WATS, TYMNET, and Telenet lines. The network serves the U.S., Europe, Mexico, and Canada, and supports hard copy, graphic, and video terminals. Languages available include: ALGOL, APL, BASIC, COBOL, FORTRAN, and PL/I.

## COMPANY BACKGROUND

- Data Resources, Inc. was founded in 1968 by Otto Eckstein and Donald B. Marron as an econometric consulting and services organization. In 1976, it became a publicly-held corporation with the sale of 300,000 shares of common stock.

## DATA RESOURCES, INC.

- Total revenue advanced 32% from \$23,871,200 in 1977 to \$31,470,700 in 1978. Net income was \$3,148,800, a 24% gain over fiscal 1977's \$2,544,700. Management claims the increase in revenues is due to a combination of the addition of new subscribers using DRI's services, increased revenue from previously existing subscribers, and the introduction of new information services.
- In addition to banking, DRI has subscription specialty packages for government, manufacturing, and large corporations. Due to the broad scope of DRI services, they market only to very large institutions.

## IMPACT ON CITITRAN

- DRI is the country's leading EDP based econometrics firm. It is not competitive to CITITRAN.

**DATATEL, INCORPORATED**  
3700 Mt. Vernon Avenue  
Alexandria, VA 22305  
(703) 549-4300

President: Earl Kendrick  
Ownership: Private  
Revenues: \$10 million (1978)  
Employees: 225

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## PROFILE

- Banking Industry Revenues
  - \$2 million (20% of total revenues; 50% of their computer services revenues of \$4 million).
- Type of Banking Services

- Processing services		100%
Remote computing	(34%)	
Interactive		
Remote batch		
Batch services	(66%)	_____
		100%
- Banking Industry Specialization
  - Commercial banks.
- Major Clients
  - Fifty-five clients ranging in size from \$20 million to \$100 million.
- Major Competitors
  - Mercantile (Virginia).
  - Philadelphia National (Pennsylvania)
- Sales Offices
  - Headquarters location.
  - Baltimore, MD.
  - Beltsville, MD.
  - Fredericksburg, MD.

## DATATEL, INCORPORATED

- Employees

-	Personnel servicing banks		15
	. Marketing	4	
	. Operations	11	
-	Total data processing personnel		40
	. Marketing	5	
	. Support	6	
	. Administrative	9	
	. Computer operations	20	
-	Total corporate personnel		225

- Geographic Concentration

- Maryland, Virginia, West Virginia, and the District of Columbia.

- Data Center Locations

- Alexandria, VA.
- Roland Oaks, VA.
- Bluefield, VA.

- Computer Hardware

- One IBM System/360 Model 50.
  - . Eight IBM 2314 disk drives.
- One IBM System/360 Model 30.
  - . Eight IBM 2314 disk drives.
- One Burroughs B3800.
- DOS operating system for the IBM equipment and MCDVI for the Burroughs.

## BANKING PRODUCTS AND SERVICES

- Datatel, Incorporated offers both on-line and batch processing services to the banking industry. Applications include:
  - Central Information File (CIF).
  - Demand Deposit Accounting (DDA).
  - Installment Loan.
  - Savings.
  - Certificate of Deposit.
  - Mortgage Loan.
  - Commercial Loan.
  - General Ledger.
  - Account Reconciliation.



## DATATEL, INCORPORATED

- Datatel now has 15 banks using batch, 32 using remote batch and 8 using interactive services. Revenues from these clients represent 20% of total revenues.
- Data for remote computing is transmitted on 1200 and 2400 baud, four-wire leased lines. Most remote users are located within 50 miles of a data center.

## COMPANY BACKGROUND

- Datatel, Incorporated was founded in May 1968 as a data processing service bureau offering general business and utility applications. In 1976 Datatel acquired Data Associates, a major competitor, and its on-line bank processing clients. Datatel has also acquired Digital Management Corporation (DMC), a minicomputer and turnkey manufacturing company.
- Fifty percent of computer service revenues now originates with banking clients. The other 50% comes from distribution, government, and trade organizations. Non-computer services revenues are derived from product sales of DMC equipment.
- DMC markets turnkey systems to the distribution industry as well as offering MANCOM, an on-line correspondence management package used by U.S. congressmen and local trade associations. In 1979 DMC will be incorporated as a subsidiary of Datatel ending its present division status.

## IMPACT ON CITITRAN

- Datatel is a well-known regional processing services firm. They are primarily a batch house but are gradually converting most of their business to on-line services and turnkey systems. Since banking is their highest growth market, they can be considered a regional competitor.



DECIMUS CORPORATION  
Data Services Group  
1 California Street  
San Francisco, CA 94111  
(415) 622-3717

President: John Margoes  
Ownership: Subsidiary of Bank  
America  
Revenues: Over \$10 million (1978)  
Employees: 400 (Data Services Group)

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## PROFILE

- Banking Industry Revenues
  - \$10,000,000+ (100% of revenues from the Data Services Group).
- Type Of Banking Services
  - Processing services      100%
  - Batch services
  - Facilities management
- Banking Industry Sepecialization
  - Mortgage Services Companies.
- Major Clients
  - Company would not provide.
- Major Competitors
  - Company would not provide.
- Data Center Locations
  - San Francisco, CA.
  - Cerritos, CA.
  - Elk Grove Village, IL.
  - Piscataway, NJ.
- Computer Hardware
  - Combination of IBM System/360 Model 65 and System/370 Model 155 under DOS/MVT.

## DECIMUS CORPORATION

- Employees

-	Data Services Group:	
.	Marketing/sales	18
.	Customer support	75
.	Computer operations	280
.	Administrative	<u>27</u>
	Total personnel	400

- Sales Offices

- Same locations as data centers.

## BANKING PRODUCTS AND SERVICES

- Decimus provides remote and batch processing services to approximately 250 financial institutions. The majority of clients are mortgage service companies.
- Fees for use of their network services are contracted based on the volume of processing needed by the client.
- Applications available on their network service include:
  - On-line Customer Information File.
  - On-line Teller Inquiry.
  - General Ledger.
  - Demand Deposit.
  - Time Deposit.
  - Certificate of Deposit.
  - Commercial Loan.
  - Installment Loan.
  - Mortgage Loan.
  - Account Reconciliation.
  - Microfiche Reporting Services.
- The majority of the application software available through the network has been purchased from other organizations. Decimus declined to name their software suppliers other than Software Pursuits, the developer of their operating system.

## DECIMUS CORPORATION

### COMPANY BACKGROUND

- Decimus Corporation was originally formed in 1969 as a private corporation. Subsequently, it was purchased and now operates as a subsidiary of Bank America Corporation.
- Decimus Corporation maintains three functional areas of business:
  - Leasing of computer mainframes.
  - Leasing of computer peripherals.
  - Data Services Group.
- The statistics and revenue figures cited in this report all pertain to the Data Services Group. Decimus was very reluctant to provide background information or any detail on their current or planned services offerings.

### IMPACT ON CITITRAN

- Decimus should be considered as a potentially leading competitor to CITITRAN. As the B of A's own for correspondent bank processing, the company has captive accounts now and will be likely to develop others that would effectively lock out CITITRAN from its customers.



DIAL COMPUTER SYSTEMS  
CORPORATION  
207 Ninth Street  
Des Moines, IA 50307  
(515) 243-2131

President: T. Joseph Wahrer  
Ownership: Subsidiary of Dial  
Finance Corp.  
Revenues: \$6,873,000 FYE 12/77  
Employees: 150

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## PROFILE

- Banking Industry Revenues
  - \$6,873,000 (100% of total revenues).
- Type of Banking Service
  - Processing services 100%
    - Remote Computing
    - Interactive
    - Remote Batch
- Banking Industry Specialization
  - Consumer finance companies.
- Major Clients
  - Parent company and 27 subscribing consumer finance companies.
- Major Competitors
  - Action Data Services, St. Louis.
- Sales Offices
  - Headquarters location.
- Employees
  - Total employees 150
    - Marketing 15
- Geographic Concentration
  - Clients of Dial Computer Systems are widely distributed throughout the U.S. and Hawaii.

- Data Center Location
  - Headquarters location.
- Computer Hardware
  - Two IBM 370/158's.

## BANKING PRODUCTS/SERVICES

- SWIFT, a data processing and telecommunications system, has been available from Dial Computer Systems Corp. (DCSC) since 1970. It provides on-line, real-time processing of loans, loan payments, check processing and general ledger. SWIFT is marketed to finance companies having a minimum of 20 branch offices. As of January 1979, DCSC was servicing almost 3.5 million accounts.
- EFTS services are operated for Iowa Transfer Systems (an association of Iowa banks). DCSC developed the first shared FTS system for Iowa Transfer in 1977. Transactions are switched to the data processing center of a customer's own bank through DCSC's data center.

## IMPACT ON CITITRAN

- Dial is an interesting company in that they specialize in the consumer finance market using systems developed for their parent. They service a specialized business that could ultimately be an attractive market for a network-oriented CITITRAN system.



**DIGITAL EQUIPMENT CORPORATION**  
Maynard, MA 01754  
(617) 897-5111

President: Kenneth H. Olsen  
Ownership: Public, NYSE  
Revenues: \$1.436 billion (1978)  
Employees: 38,000

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## PROFILE

- Banking Industry Revenues
  - \$110 million (INPUT estimate).
- Type Of Banking Services
  - None. DEC is a manufacturer of minicomputers.
- Banking Industry Specialization
  - DEC specializes in the process and discrete manufacturing industries, offering real-time data acquisition, scientific, medical, and general information processing systems.
  - Their products are sold directly to banks for general business use, primarily interactive MIS applications.
  - Banks have real-time systems using DEC minicomputers, the applications for which have been developed by systems houses, either for DEC, for the bank, or for other turnkey systems, on an OEM basic.
- Major Clients
  - Manufacturing, medical, scientific, and engineering companies worldwide.
- Major Competitors
  - Hewlett Packard.
  - IBM.
  - Data General.
- Sales Office
  - 360 sales locations worldwide.
- Employees
  - 38,000 employees worldwide.
- Geographic Concentration
  - All of U.S., Canada, Europe and Australia.

## DIGITAL EQUIPMENT CORPORATION

- Computer Hardware
  - DEC PDP 8/11 series minicomputer.
  - DEC 10 Series - Series Mega minicomputer.
  - DEC 20 Series - Series Mega minicomputer.
  - VAX 11 Series - minicomputer.

### BANKING PRODUCTS AND SERVICES

- DEC is engaged in the design and manufacture of medium to large ("Mega" mini) computers which are primarily sold in industrial markets. The systems are characterized by their ability to handle real-time as apposed to batch operations.
- Some DEC products find their way into banks to accomplish general business functions, particularly interactive MIS systems, and in specialized areas. INPUT knows of no use of DEC equipment for consumer banking operations.

### COMPANY BACKGROUND

- Digital Equipment Corporation was incorporated in 1967. Revenues have been growing at an AAGR of 40% moving from \$736 million in 1976 to over \$1.44 billion in 1978. DEC is the leader in the first tier of minicomputer manufacturers. DEC considers IBM its main competitor.

### IMPACT ON CITITRAN

- DEC, as such, is not a direct competitor to CITITRAN. Thus far, DEC has elected to stay out of direct application of its products to retail banking operations.
- DEC systems are supplied as user site hardware systems by RCS vendors and as turnkey mini systems for personal trust applications on an OEM basis.
- DEC has very competitive equipment and a good in-place field service organization.
- INPUT believes that it is unlikely that DEC will decide to joint venture retail maketing systems or develop software to directly compete with Burroughs and NCR in small to medium range banks.

**FINANCIAL DATA SYSTEMS**  
763 New Ballas Road South  
St. Louis, MO 63141  
(314) 567-1940

President: William W. Canfield  
Ownership: Private  
Revenues: \$10,000,000 FYE 12/78  
Employees: 260

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## PROFILE

- Banking Industry Revenues

- \$10,000,000 (100% of total revenues).

- Type of Banking Service

- Processing Services 90%
  - Remote Computing
  - Interactive
- Software Products 10%
- 100%

- Banking Industry Specialization

- Savings and loan institutions and mutual savings banks.

- Major clients

- Erie Savings (Buffalo) and Schenectady Savings.

- Major Competitors

- NCR, Federal Home Loan Bank, Teledata in Chicago, and Bankers Data Processing Center in Boston.

- Sales Offices

- Located at their 5 data centers and in Detroit, Baltimore, and Atlanta.

- Employees

- Marketing 10
- Administrative 50
- Customer Support/  
Operations 200

- Geographic Concentration
  - Midwest and Eastern regions.
- Data Center Locations
  - Chicago, St. Louis, Buffalo, Schenectady, and Boston.
- Computer Hardware
  - Six IBM 360's and two IBM 370's.

## BANKING PRODUCTS/SERVICES

- FDS On-Line Thrift:
  - Software sales.
    - FDS was introduced 10 years ago. A total of 100 packages have been sold to In-house users. Price of the product is \$250,000 with an additional charge of \$600 per month for maintenance.
  - Processing Service
    - FDS has a total of 100 customers in their 5 data centers. Average customer expenditures are \$8,000 per month.
    - FDS is offered as an on-line transaction processor to thrift institutions who do not have their own EDP centers. Clients sign 5 year contracts for the service. Client terminals are connected to the data centers over leased lines.

## IMPACT ON CITITRAN

- Financial Data Systems is a leading S&L processing firm using 360 and 370 based systems to provide S&L services on a remote interactive basis. If a network-based CITITRAN system designed for S&L's is made available, FDS would likely be a good acquisition candidate because of their client base and long term contracts.

**FINANCIAL INDUSTRY SYSTEMS**  
150 Windsor Street  
Hartford, CT 06115  
(203) 728-4271

President: James E. Rowe  
Ownership: Jointly held by Hartford  
Financial Systems and Martin  
Marietta Corporation  
Revenues: \$16 million 1978  
Employees: 534

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## PROFILE

- Banking Industry Revenues
  - \$15.2 million (95% of total revenues).
- Type of Banking Services

- Software products	20%
- Facilities management	80
	<hr style="width: 50px; margin-left: auto; margin-right: 0;"/>
	100%
- Banking Industry Specialization
  - Commercial banks.
- Major Clients
  - First National Bank of Maryland.
  - Hartford National Bank.
  - National Bank of Detroit.
  - Commerce Bank.
  - First National Bank.
  - First Service Company.
  - Exchange Operating Services Corporation.
  - Great Lakes Computer Center.
- Major Competitors
  - Software Products:  
Stockholder Systems.
  - Facilities Management:  
National Sharedata  
Electronic Data Systems.  
Systematics.  
Mellon.  
Citibank.  
Decimus.
- Sales Offices
  - Illinois, Indiana, Michigan, and Pennsylvania.

- Employees

- Marketing	25
- Software	400
- Computer operations	100
- Administrative	<u>10</u>
Total personnel	534

- Geographic Concentration

- North and Middle Atlantic States and as far West as Iowa.

- Data Center Locations

- As a result of the Shared Resource Management Program, 30 clients share the processing capability of eleven data centers.
- Data centers are located in Connecticut, Illinois, Iowa, Michigan, New Jersey, and Pennsylvania.

- Computer Hardware

- Computer mainframe equipment includes:
  - 2 Burroughs B4700.
  - 2 Burroughs B2700.
  - 2 IBM 370/158.
  - 1 IBM 370/145.
  - 1 IBM 370/125.
  - 2 IBM 360/40.
  - 1 IBM 360/30.
- Clients to the Shared Resource Management Program provide their own on-line terminals to the data centers. Terminal equipment includes:
  - IBM System 34.
  - IBM System 5-3.
  - IBM System 32.
  - IBM 3600
  - IBM 2980.
  - Burroughs TC200.
  - NCR 399.

## BANKING PRODUCTS AND SERVICES

- Financial Industry Systems (FIS) generates 80% of total revenues through its Facilities Management and Shared Resources Management programs. FIS assumes responsibility for an existing bank data center, adds its own specialized PIPS software package, and manages all data processing requirements for the client bank and its branches. Under the Shared Resource Management Program, FIS contracts with a group of banks to form a cooperative data center where costs and facilities are shared. Presently there are eleven data centers shared by 30 clients.

● FIS generates 20% of their banking revenues by offering the PIPS (Paperless Item Processing System) software package. The basic PIPS package licenses for \$18,700; over 200 packages are now in use. Applications provided include:

- Direct deposit of payroll, social security, pensions, interest, dividends, and annuities.
- Preauthorized payment services for standard and flexible bill statements.
- Automation of debits and credits, either inter-bank or intra-bank.
- Conversion of Automated Clearing House (ACH) magnetic tape to the appropriate applications format.

● FIS markets six modules to augment this package. They are:

- PIPS-by-Phone: A payment processing module allowing customers to pay bills, deposit funds, and obtain account information on the phone. Credit card advances and savings account transfers are also possible. This module licenses for \$25,000.
- PIPS-GIRO: Extends the automated bill paying service to corporate accounts, allowing inter-bank fund transfers and electronic bill payment. This module licenses for \$20,000 (\$10,000 if licensed with the PIPS-by-phone module).
- PIPS Cross Reference Module: Reconciles differences in how a bank and corporate client identify an individual.
- PIPS Automated Transfer/Payment Generator Module: Used for automated payment of mortgage loans and installment loans, or for savings transfer.
- PIPS Mixed Transaction Module - Allows banks to process mixed social security transactions, government transactions, and commercial transactions.
- PIPS Custom Reformatter Generator Module: Translates a corporate customer's direct deposit file into a format that can be used by an ACH.
- The PIPS packages are written in ANS COBOL and can be used on IBM 360/370 machines and on Burroughs B3700 or larger machines. The IBM machines must have a minimum 115K bytes of memory and operate on OS, OS/VS, DOS, or DOS/VS. The Burroughs machines require 65K of memory and must operate in MCP or MCPV.

● In 1978, Hartford National Bank installed an Automated Funds Transfer (AFT) system featuring a computer-to-computer fund transfer link with the Federal Reserve Bank of Boston. Hartford's Federal Reserve Wire (Fedwire) interface was the first of its kind in New England. FIS will begin marketing the Fedwire link in mid 1979. The cost has not yet been determined.

## COMPANY BACKGROUND

- Financial Industry Systems was founded in 1973 as a joint venture between Hartford Financial Systems and Martin Marietta Corporation.
- Revenues have increased 35% from \$11.85 million in fiscal 1977 to \$16 million in fiscal 1978.
- FIS has established a modified PIPS package for credit unions to use through existing FIS data centers. Twenty clients now use their service.
- Although the majority of FIS revenues are derived from facilities management contracts, FIS is actively trying to expand its share in the software market by providing new products and services.
- FIS is seriously considering beginning to offer applications on turnkey systems. Should they decide to enter this market, their first system would be available in Fall 1979.

## IMPACT ON CITITRAN

- Financial Industry Systems is a bank specialty company offering a wide range of applications via facilities management. As such, the firm is a direct competitor of CITITRAN. Because of its backing from Martin-Marietta, it could become a major force. Financial Industry Systems is also a potential CITITRAN OEM and might be an interesting acquisition candidate.



**FIRST COMPUTER CORPORATION**  
800 E. First National Bank Building  
St. Paul, MN 55101  
(612) 291-5877

President: John L Gigerich  
Ownership: Subsidiary of First Bank  
System  
Revenues: \$15 million (1978)  
(INPUT estimate)  
Employees: 425

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## PROFILE

### ● Banking Industry Revenues

- \$14.3 million (95% of total revenues) (INPUT estimate).
- Thirty-seven percent (\$5.3 million) of banking revenues originate with banks not affiliated with the parent company.

### ● Type Of Banking Services

- Processing services		100%
Remote computing	(35%)	
Batch services	(65%)	
		<hr/>
		100%

### ● Banking Industry Specialization

- Commercial banks	95%
- Other financial institutions	<hr/>
	5
	<hr/>
	100%

### ● Major Clients

- Company declined to provide.

### ● Major Competitors

- American National Bank.
- Automatic Data Processing (ADP).
- Marquette Bank.
- Midway Bank.
- Northwest Bank Company.
- Service Bureau Company (SBC).

### ● Sales Offices

- None. Contacts are made through any of First Bank System's 170 member banks throughout Illinois, Iowa, Minnesota, Missouri, Montana, North Dakota, South Dakota, Wisconsin, and Wyoming.

## FIRST COMPUTER CORPORATION

- Employees

- Marketing	0
- Customer support	150
- Computer operations	235
- Administrative	<u>40</u>
Total data processing personnel	425

- Geographic Concentration

- Heaviest concentration is in St. Paul and Duluth. Clients are also located in Illinois, Iowa, Minnesota, Missouri, Montana, North Dakota, South Dakota, Wisconsin, and Wyoming.

- Data Center Locations

- Headquarters location.
- Batch relay stations:
  - Minnesota (3).
  - North Dakota (2).
  - South Dakota (2).
  - Montana (2).

- Computer Hardware

- One IBM 3033.
- Two IBM System/370 Model 158, AP.
- Sixteen IBM 6250 disk drives.
- MVS operating system.

## BANKING PRODUCTS AND SERVICES

- First Computer Corporation (FCC) offers five banking application packages. These are:
  - Demand Deposit accounting.
  - Savings accounting.
  - Loan accounting.
  - Personal Trust.
  - Corporate Trust.
- An estimated 125 banks not affiliated with the parent, First Bank System, now use these services. This represents 37% of First Computer's total banking revenues.

## FIRST COMPUTER CORPORATION

- The company refused to give details concerning the number of clients using each application and the average cost per client.
- All processing is performed in St. Paul. Local clients take their data directly to the data center for processing in batch mode. Clients located outside the St. Paul area ship their data to a regional relay station from which it is processed in a remote batch mode. Two-thirds of the clients not affiliated with the parent deal directly with the data center.
- All marketing of FCC services is done by First Bank System's 170 member banks located throughout the North Central U.S.

## COMPANY BACKGROUND

- First Computer Corporation (FCC) was formed by First Bank System in 1966 specifically to provide processing services to its 170 member banks. Sixty-three percent of FCC banking revenues originate with banks affiliated with the parent company.
- FCC also provides general business applications to manufacturers in the North Central region of the U.S.

## IMPACT ON CITITRAN

- FCC is another of the bank-controlled services operations providing services exclusively to the parents' correspondents/members local banks. They are a potential "OEM" outlet for CITITRAN.



## FIRST DATA RESOURCES

7301 Pacific Street  
Omaha, NE 68114  
(402) 399-3950

President: Bruce Anderson  
Ownership: Private  
Revenues: \$30 million (1978) (INPUT  
estimate)  
Employees: 2,000

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## PROFILE

- Banking Industry Revenues

- \$27 million (90% of total revenues) (INPUT estimate).

- Type Of Banking Services

- Processing services 99%
- Batch services
- Remote batch services
- Software services 1  
100%

- Banking Industry Specialization

- Commercial banks, savings and loan, credit unions.

- Major Clients

- Mid American Bankcard Association
- Mountain State Bankcard Association.
- Southeast Bankcard Association.

- Major Competitors

- Company knew of no major competitors other than institutions performing in-house processing.

- Sales Offices

- Atlanta, Denver, Omaha, San Mateo.

- Employees

- Marketing 12
- Customer support 38
- Computer operations 125
- Administrative 125
- Data entry 1,500
- Total personnel 2,000

## FIRST DATA RESOURCES

- Geographic Concentration
  - None. Services are marketed throughout the U.S.
- Data Center Locations
  - Atlanta, GA.
  - Denver, CO.
  - Omaha, NE.
  - San Mateo, CA.
- Computer Hardware
  - Three IBM System/370 Model 158s.
  - Two IBM System/370 Model 165s.
  - One IBM System/370 Model 155.
  - One Amdahl System/470 V/6
  - Two Amdahl System/470 V/5.
  - Operating systems include OS, DOS, and OS/VSI.

## BANKING PRODUCTS AND SERVICES

- First Data Resources (FDR) specializes in credit, debit, and private label plastic card receipt processing. Both batch and remote batch modes are supported.
- A full range of transaction card services is available, including:
  - Data capture.
  - Cardholder, merchant, and client accounting.
  - Statement preparation.
  - Settlement.
  - Security functions.
  - Credit authorization.
  - Mailing services.
  - On-line inquiry.
  - Mail order service with statements.
- FDR presently has 150 banks using their services, although they can support any institution using or issuing plastic cards.

## FIRST DATA RESOURCES

- FDR markets their First Data Resources processing credit card system as a software product outside the U.S. The base price is \$150,000 but increases greatly when features are added such as on-line inquiry. The package operates on IBM System/370 Model 155 and larger machines under OS, OS/VS, DOS, DOS/VS, or OS/VSI. Income from software sales represent less than one percent of total revenues.

## COMPANY BACKGROUND

- First Data Resources was incorporated in 1971 in Nebraska to provide credit card processing. Though they can serve any industry, banks comprise 90% of their revenues. Other clients are from the transportation and retail distribution industries.

## IMPACT ON CITITRAN

- First Data Resources is a credit card processing company, one of the largest. The company was recently placed under a holding firm, FDR, Inc. and the new parent anticipates making a number of acquisitions in the near future.





FIRST OF BOSTON COMPUTERISTICS,  
INC.  
100 Federal Street  
Boston, MA 02110  
(617) 434-6357

President: Philip E. Jennings  
Ownership: Joint venture of Uniroyal,  
Inc. and First National Bank of Boston  
Revenues: \$4.5 million  
Employees: 200

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## PROFILE

- Banking industry Revenues
  - \$4.3 million (95% of total revenues).
- Type Of Banking Services
  - Processing services 100%
  - Remote computing (25%)
  - Interactive
  - Remote batch
  - Facilities manage- (75%)
  - ment
  - \_\_\_\_\_
  - 100%
- Banking Industry Specialization
  - Commercial banks and credit unions.
- Major Clients
  - Company refused to provide.
- Major Competitors
  - Financial Industry Systems.
  - National Sharedata Corporation.
  - Systematics, Inc.
- Sales Offices
  - Headquarters location.
  - One in Connecticut.
- Employees
  - Marketing 6
  - Customer support 20
  - Computer operations 169
  - Administrative 5
  - \_\_\_\_\_
  - Total personnel 200

## FIRST OF BOSTON COMPUTERISTICS, INC.

- Geographic Concentration
  - New England States.
- Data Center Locations
  - Headquarters location.
  - Four facilities management locations.
- Computer Hardware
  - One IBM 360 series.
  - One IBM 4300 series.
  - Two IBM 370 series.
  - OS, DOS/VS operating systems.

## BANKING PRODUCTS AND SERVICES

- First of Boston Computeristics (FBC) offers eight applications to its banking clients:
  - Demand Deposit Accounting.
  - Savings.
  - Mortgage Loan.
  - Personal Loan.
  - College Loan.
  - Trust Processing.
  - Certificate of Deposit.
- FBC manages four banks under its Facilities Management program. This agreement allows FBC to use the host computer to process data for other client banks. One such center is located in Maine (Augusta), one in New Hampshire (Manchester), and two in Connecticut. FBC provides processing services to five banks and three credit unions on these host computers.
- Remote computing is performed via a leased-line network serving 15 New England cities.

## FIRST OF BOSTON COMPUTERISTICS, INC.

### COMPANY BACKGROUND

- First of Boston Computeristics was formed in 1973 as a joint venture between Uniroyal, Inc. and First National Bank of Boston. Seventy-one percent of total revenues are derived from providing facilities management services to client banks. Twenty-four percent comes from processing services. The remaining 5% of total revenues is generated through their National Check Transmission service, a lock-box service for the manufacturing and distribution industries.
- FBC presently serves only New England, but is willing to provide services to any bank in the U.S.

### IMPACT ON CITITRAN

- FBC is trying to establish itself in the same business as National Sharedata; Facilities Management for banks. Unlike most other bank-controlled service groups, it has a profit charter and, if aggressive enough, could prove to be either a competitor or customer of CITITRAN.



**FLAGSHIP SERVICES CORPORATION**  
4720 Cypress Street  
Tampa, FL 33607  
(813) 224-2265

President: Forest Waddle  
Ownership: Subsidiary of Flagship  
Banks, Inc.  
Revenues: \$5.1 million (1978)  
(INPUT estimate)  
Employees: 200

---

## PROFILE

- Banking Industry Revenues
  - \$5.1 million (INPUT estimate) (100% of total revenues).
  - Twenty-five percent of their revenue is derived from banks not affiliated with the parent corporation.
  
- Type of Banking Services

- Processing services		100%
Remote batch	(5%)	
Batch	(95%)	
		-----
		100%
  
- Banking Industry Specialization
  - Commercial banks and savings and loan institutions.
  
- Major Clients
  - Flagship Banks Inc.
  - Ellis Banks Inc.
  
- Major Competitors
  - First National Bank of Tampa.
  - Exchange National Bank of Tampa.
  - Southeast Bank.
  
- Sales Offices
  - Tampa, Florida.
  - Miami, Florida.
  - Jacksonville, Florida.

## FLAGSHIP SERVICES CORPORATION

- Employees

- Marketing	20
- Customer support	15
- Computer operations	150
- General Administrative	<u>15</u>
Total personnel	200

- Geographic Concentration

- Florida only.

- Data Center Locations

- Tampa, Florida.
- Miami, Florida.
- Jacksonville, Florida.

- Computer Hardware

- Two IBM 370/145s with 556K memory.
- One IBM 360/40.
- Ten IBM 3330 Disk drives.
- Ten IBM 3420 Tape drives.
- All operate in a DOS/VS environment.

## BANKING PRODUCTS AND SERVICES

- Flagship Services Corporation (FSC) offers seven applications:

- Demand Deposit Accounting.
- Savings.
- Certificate of Deposit.
- Mortgage Loan.
- Commercial Loan.
- Installment Loan.
- Account Reconciliation.

- Ninety percent of the 50 client banks process their applications in batch mode, only ten percent have remote computing capability.

- Fees are calculated by number of units processed. DDA cost \$.05 per transaction, Savings \$.14 per transaction, and Mortgage Loan costs \$.37 per transaction.

## FLAGSHIP SERVICES CORPORATION

- Remote computing is available through three leased lines, one originating in each data center and serving 5 cities.

### COMPANY BACKGROUND

- Flagship was incorporated in 1963 as Marine Data Center. In 1969 Flagship Banks Incorporated, a bank holding company, purchased the company and renamed it Flagship Services Corporation (FSC). Seventy-five percent of FSC revenues originates with affiliated banks of the parent company.
- FSC believes the marketing environment in Florida is very competitive. The company finds it very difficult to attract new processing services customers due to the decline in computer hardware prices.
- In 1979 FSC plans to offer new applications to their clients. Although they refused to comment on what these will be, FSC did indicate that turnkey systems were not under consideration at this time.
- The company also plans to replace their 360/40 with a 303X.
- FSC does not actively market their services and stated they could not provide product literature.

### IMPACT ON CITITRAN

- Flagship provides DDA and bank office processing to vendor banks of the Flagship group. Since they are owned by the bank group, it is unlikely they can be displaced, and in that context they are competitive to CITITRAN.





FULTON NATIONAL BANK  
55 Marietta Street  
Atlanta, GA 30302  
(404) 529-4111

President: Gordon Jones  
Ownership: Subsidiary of Fulton  
National Corporation  
Assets: \$1.5 billion (1978)  
(INPUT estimate)  
Employees: 1,200

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## PROFILE

- Banking Industry Revenues

- \$850,000 (INPUT estimate) revenue from banks not affiliated with the parent Fulton National Corporation.

- Type of Banking Services

- Processing services 90%
  - Remote computing (20%)
  - Batch (80%)
- Professional services 10%
- 100%

- Banking Industry Specialization

- Commercial banks only.

- Major Competitors

- First National Bank of Georgia.
- Federal Data Processing.

- Sales Offices

- Headquarters location.

- Employees

- Total bank personnel 1,200
- Data processing personnel: 35
  - Marketing 0
  - Customer services 20
  - Computer operations 10
  - Administrative 5

- Geographic Concentration

- Georgia only.

## FULTON NATIONAL BANK

- Data Center Location

- Atlanta and Moultrie, Georgia.

- Computer Hardware

- One Dual Honeywell 66-10.
- One Dual Honeywell 60-80.
- One Honeywell 60-40.
- Entrex system.
- Burroughs 1700.
- All Honeywells use the GCOS operating system.

### BANKING PRODUCTS AND SERVICES

- Fulton National Bank Data Processing Division (FNB) offers two applications to bank clients:
  - Demand Deposit Accounting.
  - Proof of Deposit
    - Check clearing.
    - Reconciliation.
    - Funds Transfer.
- Twenty-eight banks in Georgia now use this service. Four use Wats lines to perform remote processing while twenty-four use normal batch processing.
- FNB operates a Burroughs 1700 computer at the Moultrie automated clearing-house to facilitate electronic fund transfers.

### COMPANY BACKGROUND

- Fulton National Bank was incorporated in Georgia in 1910. They have offered processing services to non-affiliated banks since 1976.
- The data processing department at FNB offers two applications to local banks: Proof of Deposit and Demand Deposit Accounting (DDA). These two products provide \$850,000 in revenue from non-affiliated banks.
- FNB offers medical, general business, and engineering applications to a few local companies. These services provide 10% of their computer services revenues.

## FULTON NATIONAL BANK

- FNB plans to offer pay-by-phone and on-line transaction processing within the next two years.
- FNB does not market their service. No general or product literature is available.

## IMPACT ON CITITRAN

- The EDP department of this bank offers services to correspondents and commercial clients. They do not market their services, but provide only what they have to do to maintain their financial accounts.



FLORIDA SOFTWARE SERVICES  
711 Semoran Blvd.  
Altamonte Springs, FL 32701  
(305) 831-3001

President: Kenneth Kirchman  
Ownership: Private  
Revenues: \$13 million 1978  
(INPUT estimate)  
Employees: 300

---

## PROFILE

- Banking Industry Revenues
  - \$11.7 million (INPUT estimate) (90% total revenues).
- Type of Banking Services
  - Processing services 25%
    - Remote computing
    - Interactive
    - Remote batch
    - Facilities Management
  - Software products 75%
  - 100%
- Banking Industry Specialization
  - Commercial banks and credit unions.
- Major Clients
  - Citibank.
  - Continental Bank of Chicago.
  - First City Bank of Houston.
- Major Competitors
  - NSA, Inc.
- Sales Offices
  - Orlando, Florida.
- Employees
  - Marketing 20
  - Software 200
  - Computer operations 60
  - Administrative 20
  - Total personnel 300

- Geographic Concentration
  - Florida software markets their products and services throughout the United States.
- Data Center Locations
  - Headquarters location.
  - Tallahassee, Florida.
- Computer Hardware
  - One IBM 370/148 in each location.

## BANKING PRODUCTS AND SERVICES

- Florida Software Services (FSS) offers 16 application software packages to the banking industry. These are:
  - Accounts Payable System - priced from \$4,200 plus \$200 maintenance per year. Ten packages have been sold to date.
  - Amortization Schedule System - priced from \$1,200 plus \$50 maintenance per year. Twenty-five packages have been sold to date.
  - Automated Dealer Floor Plan System - priced from \$10,000 plus \$300 maintenance per year. Eighty-five packages have been sold to date.
  - Bond Portfolio Analysis System - priced from \$7,700 plus \$350 maintenance per year. Forty-five packages have been sold to date.
  - Central Information File System (CIF III).
  - Certificates of Deposit System (CD III) - priced from \$15,300 plus \$1,500 maintenance per year.
  - Commercial Loan System - priced from \$16,300 plus \$1,650 maintenance per year. One hundred twenty packages have been sold to date.
  - Corporate Trust/Stock Transfer System - priced from \$6,700 plus \$350 maintenance per year. Forty packages have been sold to date.
  - Demand Deposit Accounting/Credit Line System (DDA-IV) - priced from \$15,800 plus \$1,200 maintenance per year.
  - Financial Management System (FM II) - priced from \$14,700 plus \$1,500 maintenance per year. One hundred packages have been sold to date.
  - General Purpose Payroll System (PAYCER) - priced from \$9,400 plus \$450 maintenance per year. One hundred fifty packages have been sold to date.
  - Installment Loan IV System (IL IV) - priced from \$15,700 plus \$1,600 maintenance per year. One hundred thirty packages have been sold to date.
  - Mortgage Loan Systems (MIL and MILX) - priced from \$12,700 plus \$1,300 maintenance per year. One hundred fifteen packages have been sold to date.

- Personal Trust/Common Funds System - priced from \$14,600 plus \$700 maintenance per year. Seventy-five packages have been sold to date.
  - Savings System II - priced from \$10,300 plus \$1,000 maintenance per year. One hundred packages have been sold to date.
  - Supplies Inventory Control System (COMSTOCK) - priced from \$4,800 plus \$300 maintenance per year. One hundred packages have been sold to date.
- All packages operate either on IBM 360/370/303X with OS, OS/VS, DOS, or DOS/VS environments, or on Burroughs B2500 medium size systems.
  - FSS concentrates selling these packages to banks with at least \$50 million in assets. FSS products are currently used by over 1,000 banks nationwide.
  - FSS offers all of their financial applications on a remote computing network. Data is transmitted to their two Florida data centers via leased and Wats lines. There are currently 70 banks using this network.

## COMPANY BACKGROUND

- Florida Software Services, founded in 1968, is one of the world's largest suppliers of proprietary software packages to the financial industry. More than 1000 institutions now use FSS products.
- For banks without in-house data processing capability, FSS offers all their applications on a remote computing network. Seventy institutions now use this service.
- The majority of FSS revenue (75%) comes from software products sales. The remaining 25% is derived from processing services.
- FSS provides limited facilities management in the medical industry as well as providing payroll services to various industries on their processing network.

## IMPACT ON CITITRAN

- Florida Software is a leader in bank applications software packages. They will not compete with CITITRAN, but should be considered as a company capable of working with CITIBANK to develop applications software for CITITRAN.





**GTE INFORMATION SYSTEMS**  
1 Stamford Forum  
Stamford, CT 06904  
(203) 357-2000

President: Henry Lehne  
Ownership: Subsidiary of GTE Inc.  
Revenues: \$20 million (1978)  
(INPUT estimate)  
Employees: 2500

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## PROFILE

- Banking Industry Revenues
  - \$18 million (90% of total revenues).
- Type of Banking Services
  - Processing services 100%
  - Data-base service (100%) 100%
- Banking Industry Specialization
  - Brokerage firms.
- Major Clients
  - Paine Webber
  - Bache
  - Dean Witter
- Major Competitors
  - Bunker Ramo Corporation
  - Quotron Systems, Inc.
- Sales Offices
  - Atlanta, Boston, Cleveland, Chicago, Dallas, Kansas City, Los Angeles, Mt. Laurel, Miami, San Francisco, Minneapolis.
- Employees
  - Total personnel: 2500
  - Total in computer services: 1500. (No further breakdown was available.)
- Geographic Concentration
  - GTE systems has clients throughout the United States and Canada.

## GTE INFORMATION SYSTEMS

- Data Center Locations
  - Mt. Laurel, New Jersey.
  - Satellite centers are located in Atlanta, Boston, Chicago, Cleveland, Dallas, Kansas City, Los Angeles, Miami, and San Francisco.
- Computer Hardware
  - One IBM 370/158 and one IBM 3031 are installed at the data center.
  - Each satellite center has two DEC PDP-11/70 computers. (Further information on their hardware/operating environment was considered proprietary.)

## BANKING PRODUCTS AND SERVICES

- GTE Information Systems (GTE-IS) markets an on-line quotation system of stock prices for all major security exchanges in the United States. Clients obtain immediate stock price information by subscribing to the basic service. Four options are available:
  - Automatic tracking of twenty specific items of the broker's choice, giving quotes immediately as they change.
  - Immediate notice when a certain stock reaches a predetermined level.
  - Dow Jones news ticker.
  - Wire Service news ticker.
- The basic service costs \$500 per month. An additional fee of approximately \$100 per month must be paid directly to each stock exchange accessed for rights to their information.
- GTE-IS presently has an estimated 600 clients. Each client has an average of 4.5 locations linked to the stock network.
- In addition to providing the stock quotation service, GTE-IS manufactures processors and terminals. Two systems are available:
  - Video Master System combines a processor and CRT terminal for video reception only. This system leases for \$81 per month on a one to three year lease.

## GTE INFORMATION SYSTEMS

- Financial Systems One adds a printer to the video configuration and permits hard-copy of any data transmitted. This system leases for \$215 per month; 1800 systems are now installed.
- Although the service is available independent of GTE-IS hardware, the hardware is sold only for use with the service.

## COMPANY BACKGROUND

- GTE Information Systems (GTE-IS) was formed in 1970 by General Telephone and Electronics Inc. (GTE) to provide financial information to brokerage companies throughout the country.
- The cost of the GTE-IS quotation system is highly competitive with similar services offered by Bunker Ramo and Quotron. GTE-IS transmits on a dedicated leased line network.
- GTE-IS processors are also used in point-of-sale terminals for fast-food chains.

## IMPACT ON CITITRAN

- GTE Information Services provides on-line stock/bond quotation services and has about 25% of the market. (See INPUT report "Remote Computing Services Markets for Economic and Financial Data Bases.") The division is not competitive with CITITRAN. However, INPUT has received rumors that GTE-IS may expand through acquisition into other financial processing services.



GESCO CORPORATION  
3747 East Shields Avenue  
Fresno, CA 93726  
(209) 224-8373

President: Mildred Huddleston  
Ownership: Subsidiary of Guarantee  
Savings and Loan  
Revenues: \$6 million (1978)  
Employees: 85

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## PROFILE

- Banking Industry Revenues

- \$6 million (100% of total revenues).

- Type Of Banking Services

- Processing services 100%  
Interactive

- Banking Industry Specialization

- Savings and loan institutions.

- Major Clients

- Beverly Hills Federal Savings and Loan Association.
- Coast Federal Savings and Loan Association.
- Guarantee Savings and Loan Association.
- Homestead Savings and Loan Association.
- Sacramento Savings and Loan Association.
- World Savings and Loan Association.

- Major Competitors

- Data Line Service Company.
- Midcontinent Computer Service, Inc.
- NCR Corporation.

- Sales Offices

- Headquarters location.

- Employees

- Marketing 1
- Customer support 24
- Computer operations 50
- Administrative 10
- Total personnel 85

## GESCO CORPORATION

- Geographic Concentration
  - California, Colorado, Idaho, Nevada, Oregon, Washington.
- Data Center Locations
  - Headquarters location.
- Computer Hardware
  - Two IBM System/370 Model 158 mainframes OS/VS-1.
  - IBM 3350 disk drives.
  - IBM 3420-8 tape drives.

## BANKING PRODUCTS AND SERVICES

- GESCO Corporation offers on-line savings and loan processing to 18 institutions in the Western U.S. Six applications are presently available:
  - Savings Accounting:
    - Alternate name and address.
    - Account interest rate and processing option tables.
    - Check preparation.
    - Deferred compensation accounts.
    - Daily certificate renewals.
    - Holiday club accounts.
    - Plastic card support.
    - Statement savings.
    - Transfer of credit.
    - Uncollected funds.
  - Real Estate Loan Accounting:
    - Commitment subsystem.
    - Loans-in-progress subsystem.
    - Document preparation subsystem.
    - Impounds subsystem.
    - Insurance subsystem.
    - Application register subsystem.
    - Mortgage banking system.
    - Automatic payment modification.
    - Standard and customized reports.
    - EFTS preauthorized payments.

## GESCO CORPORATION

- Collection Accounting:
    - . Late charge calculation and assesment.
    - . Automatic crediting to savings account of collection payment.
    - . Set-up fee and service charge processing.
    - . Payment book posting and preparation of owner notice.
  - Consumer Loan Accounting:
    - . Add-on.
    - . Susidiary loan-in-progress accounts.
    - . Monthly payment notices and coupons.
    - . Unearned discount calculations reports.
    - . Standard and customized reports.
  - Loans-In-Progress Accounting:
    - . Voucher and progress payment.
    - . Check preparation.
    - . Loan settlement statement.
    - . Cost breakdown reports.
  - General Ledger Accounting:
    - . Expanded teller, branch, and association level totals.
    - . Prior, current, and next year budgets by month.
    - . Prior and current actual by month.
    - . Fixed asset reporting.
    - . Custom budget and management reports.
- Data is transmitted via 1200, 2400, 4800, and 9600 baud leased lines using BTAM and VTAM teleprocessing software. The GESCO network now serves 400 branch office locations.
  - All branches served by the GESCO service must install intelligent CRT terminals; GESCO can accomodate equipment of any major manufacturer. Installation and maintenance of the terminal remains the user's responsibility.
  - Also available is the GESCO Management Information Service (GMIS), offering custom report formating and on-line inquiry.
  - Most clients have no in-house computer capability and use all applications offered on the GESCO service.

## GESCO CORPORATION

### COMPANY BACKGROUND

- GESCO Corporation was incorporated by Guarantee Savings and Loan in 1970. Prior to 1970, GESCO operated as the DP division of the parent company. Presently, ten percent of total revenues originate with the parent and 90% from non-affiliated savings and loan institutions.
- GESCO aims its marketing efforts at institutions with over \$200 million in assets with the anticipation that the larger firms will most likely use the full GESCO service.
- New applications planned for the next three months include lock-box services, mortgage banking packages, and NOW (Negotiable Order Withdrawal) processing services.

### IMPACT ON CITITRAN

- GESCO is a regional S&L processor controlled by a local S&L. It is not competitive to CITITRAN nor is it likely to be.



**HAWAII COMPUTER SERVICES**  
800 Nuuanu Avenue  
Honolulu, Hawaii 96846  
(808) 537-8705

President: H. A. Smith  
Ownership: Subsidiary of Hawaii  
Bank Corporation  
Revenues: \$4.8 million (1978)  
(INPUT estimate)  
Employees: 121

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## PROFILE

- Banking Industry Revenues

- \$4.8 million (100% of total revenues) (INPUT estimate).

- Type Of Banking Services

- Processing services 100%
- Remote computing (33%)
- Interactive
- Remote batch
- Batch services (66%)
- \_\_\_\_\_
- 100%

- Banking Industry Specialization

- Commercial banks.

- Major Clients

- Bank of Hawaii.

- Sales Offices

- Headquarters location.

- Employees

- Marketing 1
- Customer support 10
- Computer operations 100
- Administrative 10
- \_\_\_\_\_
- Total personnel 121

- Geographic Concentration

- Hawaii.

- Data Center Location

- Headquarters location.

## HAWAII COMPUTER SERVICES

- Computer Hardware
  - One IBM 3031.
  - Two IBM 370/145s.
  - Ten IBM 3330 disk drives.
  - VS-1 operating system.

## BANKING PRODUCTS AND SERVICES

- Hawaii Computer Services (HCS) offers ten applications to its banking clients. These are:
  - Check Accounting.
  - Savings Accounting.
  - Mortgage Loan.
  - Commercial Loan.
  - Personal Loan.
  - Installment Loan.
  - General Ledger.
  - Demand Deposit Accounting (DDA).
  - Certificate of Deposit.
- HCS presently serves 65 locations, 45 in batch and 20 in remote batch mode. Data is transmitted over an intra-island leased line network.
- MICR data entry and processing are available from HCS. Some Visa receipt processing is also performed.

## COMPANY BACKGROUND

- Hawaii Computer Services was formed in 1973 by Hawaii Bank Corporation to service its subsidiary, Bank of Hawaii. HCS provides both batch and remote batch processing to Bank of Hawaii's 65 branches. Revenues from banks not affiliated with the parent company are an extremely small percentage of total revenues.
- The company stated that no product literature or general information was available since they do not actively market their services.

## IMPACT ON CITITRAN

- HCS is an incorporated division of the Hawaii Bank Corporation serving only the branches of the parent. It would be the buyers of CITITRAN services.

INFORMATICS, INC.  
21031 Ventura Blvd.  
Woodland Hills, CA 91364  
(213) 887-9040

President: Walter F. Bauer  
Ownership: Private  
Revenues: \$98.5 million, Fiscal Year  
End 12/78  
Employees: 2,700

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## PROFILE

- Banking Industry Revenues
  - \$8,000,000 (INPUT estimate)
- Type Of Banking Services
  - Processing Services 50%
  - Software products 50%
- Banking Industry Specialization
  - Commercial banks.
  - Savings and loan institutions.
- Major Clients
  - Chase Manhattan Bank.
  - Bank of New York.
  - Bank of America.
  - Glendale Savings Bank.
  - Riggs' National Bank.
  - Bank of Oklahoma.
  - Fidelity Bank.
  - Wells Fargo Bank.
  - Trust Company of Georgia.
  - Houston National Bank.
- Major Competitors
  - General Electric Information Services.
  - Rapidata, Inc.
  - National CSS, Inc.
  - Tymshare, Inc.
  - McDonnell Douglas Automation Company.
  - Applied Financial Systems.
  - Management Science America.

## INFORMATICS, INC.

- Sales Offices

- Sales offices correspond with the 54 branch office locations across the country and the 12 international offices. Major sales offices include River Edge, NJ; Des Plaines, IL; Atlanta, GA; Dallas, TX; New York, NY; Raleigh, NC; and McLean, VA.

- Employees

- Company was unable to provide breakdown other than the 2,600 U.S. employees and 100 international employees.

- Geographic Concentration

- Revenues are derived from clients throughout the U.S. Concentrations are around large metropolitan areas in the Northeast, West and the Southeast.

- Data Center Locations

- Fairfield, NJ.
- Columbus, OH.

- Computer Hardware

- One IBM System/370 Model 158, and Intel AS/6 and an Intel AS/5 at Fairfield and two IBM System/370 Model 168, in Columbus. The VM/CMS and a VS operating system are used.

## BANKING PRODUCTS AND SERVICES

- The Fairfield data processing center has been involved in providing remote computing services to the banking community since 1974. It offers its services via the company's communications network which utilizes leased and WATS lines together with the services of TELENET. The network covers over 200 cities.
- Specific applications include credit analysis, a new package Analyst Four which has six banking clients, and financial planning and statistical tools such as SIMPLAN. SIMPLAN, a multi purpose financial planning package, provides merger, acquisition analysis, cash flow analysis and cost projection. Banking clients may also use AFSTAT a statistical analysis system which offers the full range of analytical capabilities including arithmetic and data manipulation options.

## INFORMATICS, INC.

- Also available is SSI, an economic modeling tool, and Model 204 a data management system.
- Informatics also markets a software package to the financial industry, the Corporate Shareholder System (CSS). CSS is a widely used product for the processing of stock and registered bond holder's records. It was acquired from the Trust Company of Georgia. More than 100 corporations and banks such as Bank of Oklahoma, Seattle First National Bank and Exchange Bank of Tampa, use the product. CSS has a base price of \$35,000 and ranges up to \$135,000.
  - It is a modular system designed to meet users specific requirements. Its capabilities include update, a complete validation of all file maintenance and purchase and sale transactions prior to combined update run. There is an optional front end for data entry and a consolidation module to eliminate account duplications.
  - CSS also has report request, dividend, with an option for dividend investment and employee stock option, proxy, tax report, stock dividend/stock split, and accumulative journal/deletions. It will operate on any IBM System/360 and 370 Model 25 or larger, or Burroughs 3500/4700. Over 120 installations have been sold of which 60 are in use by banks. It operates in on-line, batch and remote batch modes.
- The company is looking forward to offering payroll package and Human Resources system later this year. Clients targeted will be the top 200 banks. Payroll will cost \$20,000 and Human Resources \$45,000.
- These software products are only offered in North America. International marketing is under consideration.
- Banking clients in addition use implementation systems such as INQUIRY/IMS which is a network interactive data retrieval language for IMS data bases. It is designed for all users regardless of their technical orientation. The query language which can be tailored to each individual installation allows the user to select, manipulate by arithmetic, sort and display detail and, or summary data at the terminal or in batch. It is being used currently by the Bank of America and Riggs National Bank. Purchase price is \$43,800. This product is available for IBM Systems/360 and 370 OS, OS/VS operating systems, and Amdahl 470 with IMS/DC or TSO.

## INFORMATICS, INC.

### COMPANY BACKGROUND

- Informatics, Inc. was organized in Los Angeles in 1962 to provide custom software development and contract programming to the government marketplace. Its first standard software product, Mark IV, was offered in 1967 and is one of the most successful software products ever to be developed. In 1974 the company became a subsidiary of the Equitable Life Assurance Society, the nation's third largest life insurance company.
- Informatics now provides software products, processing and professional services to a wide range of commercial and government markets. The company has become a world leader in the development of software products. U.S. revenues from software products exceeded \$24 million in 1978.
- Informatics revenues have grown from \$22 million in 1972 to \$98 million in 1978, an AAGR of 22%.

### IMPACT ON CITITRAN

- Informatics is the world's largest systems software company. It has a small eastern division which offers on-line processing and some of its customers are banks. However, applications offered are not DDA-based and are therefore not competitive to CITITRAN.

IMPERIAL COMPUTER SERVICES, INC.  
3848 Carson Street, Suite 320  
Torrance, CA 90503  
(213) 540-5595

President: Dwight H. Mensinger  
Ownership: Private  
Revenues: \$7 million 1978  
Employees: 175

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## PROFILE

- Banking Industry Revenues
  - \$700,000 (10% of total revenues).
- Type Of Banking Services
  - Professional services 100%
- Banking Industry Specialization
  - Commercial banks.
- Major Clients
  - Declined to specify particular clients.
- Major Competitors
  - Independent consultants.
- Sales Offices
  - Headquarters location.
  - New York.
- Employees

- Marketing sales	10
- Software services	20
- Consulting	10
- Computer operations	95
- General and administrative	<u>40</u>
Total personnel	175
- Geographic Concentration
  - Pacific region (primarily California).

## IMPERIAL COMPUTER SERVICES, INC.

- Data Center Locations
  - Sunnyvale, California.
  - Los Angeles, California.
- Computer Hardware
  - One Intel AS/3.5 DOS/MVT.
  - One Intel AS/5.3 DOS/VS.
  - One IBM System/360 Model 40 DOS/MVT.
  - One Honeywell 2300.

## BANKING PRODUCTS AND SERVICES

- The Systems and Consulting Division of Imperial Computer Services (ICS) primarily provides management consulting services to banks or large corporations on electronic banking and data base management systems. This group contributes approximately 10% of ICS's total revenues.
- ICS plans to merge I.T.S. Financial Systems, Inc., currently a subsidiary of a sister company, Imperial Data Services, into Imperial computer within the next 3 to 6 months.
  - I.T.S. has developed a turnkey mortgage loan system, OPTIMUM, which tracks and processes loans from application through funds disbursement. Features of the OPTIMUM system are:
    - Document preparation of all forms.
    - Pipeline tracking reports which show all pertinent loan information for financial and work load planning.
    - Warehouse reports which give timely access to all funded loans available for sale.
    - Commitment control reports.
    - English report generation.
  - OPTIMUM is based on a Microdata minicomputer and is sold on a purchase only basis. Price of the product ranges from \$75,000 to \$200,000. There are three OPTIMUM systems installed at the present time.

## COMPANY BACKGROUND

- Imperial Computer Services, Inc. is a California based privately held holding company which provides professional consulting services and operates a number of wholly owned data processing service company subsidiaries.



## IMPERIAL COMPUTER SERVICES, INC.

- Founded by Dwight Mensinger (former president of Leader Corporation) and six other men from Palos Verdes, California in 1979, ICS is actively acquiring computer services companies in the medical, banking, and manufacturing industries. It is INPUT's belief that ICS has no real commitment to these industry markets, and is only acquiring companies to build an image of a well-rounded services company so that they will appear to be an attractive acquisition candidate themselves.
- Companies recently acquired by ICS:
  - Carter Associates, Sunnyvale, California: operates a data center which primarily provides application services to electronic manufacturing firms.
  - Network Data Processing, Los Angeles: provides interactive processing services for wholesale distributors in the Los Angeles area.
  - Massey Data Entry Services, Santa Clara: data entry services.
  - I.T.S. Financial: turnkey mortgage loan system.
  - Medical Data Systems, Long Beach: a pending acquisition from Intel Corporation. Medical data provides batch processing to 30 hospitals in Los Angeles.

## IMPACT ON CITITRAN

- Imperial will not compete with CITITRAN given its present roster of subsidiaries. However, the company is acquiring firms as fast as they can be found, and it could be that Imperial could become competitive via a new acquisition.



INSURANCE SYSTEMS OF AMERICA, INC.  
6855 Jimmy Carter Blvd.  
Atlanta, GA 30362  
(404) 449-3950

President: David P. Harbin  
Ownership: Private  
Revenues: \$11.5 million (1978)  
Employees: 400

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## PROFILE

- Banking Industry Revenues

- \$115,000 (1% of total revenues).

- Type Of Banking Services

- Software products 100%

- Banking Industry Specialization

- Commercial banks.

- Major Clients

- Company refused to provide.

- Major Competitors

- Company refused to provide.

- Sales Offices

- Atlanta, Boston, Chicago, Detroit, Fairfield, Ft. Lauderdale, London, Long Island, Los Angeles, New York, Philadelphia, San Francisco, Stamford, Washington, DC.

- Employees

- |                       |     |
|-----------------------|-----|
| - Marketing           | 52  |
| - Software services   | 228 |
| - Computer operations | 40  |
| - Administrative      | 80  |
| Total personnel       | 400 |

- Geographic Concentration

- None. Products are marketed throughout the U.S.

## INSURANCE SYSTEMS OF AMERICA, INC.

- Data Center Locations
  - Headquarters location.
- Computer Hardware
  - IBM System/360 Model 65.
  - IBM System/370 Model 148.
  - OS/VS operating system.

## PRODUCTS AND SERVICES

- Insurance Systems of America (ISA) has two software systems used by the banking industry. They are:
  - Bond and Stock package, priced between \$24,000 and \$34,500, is an investment accounting and reporting system offering:
    - Automated accounting interface.
    - Multi-portfolio, multi-company processing.
    - Complete transaction audit trail.
    - Yields, amortization, and discount accumulation calculation.
    - Cash flow projects.
    - Stock splits and dividend allocation.
    - Twenty-eight portfolio accounting, analysis, and regulatory reports.
  - On-line Securities Control, Analysis, and Reporting package, priced between \$47,500 and \$75,000 provides:
    - Cash and margin accounting.
    - Disposal priority selection.
    - Average cost calculation and reporting.
    - Tax reporting and intercompany transactions.
    - Dynamic income projection and reporting.
    - Automated price and dividend input.
    - Automatic pricing within an hour of market close.
    - Mutual fund calculation.
    - Net available cash for investment reporting.
  - These packages perform the following functions on IBM 360/370 mainframes under OS, OS/VS, DOS or DOS/VS:
    - Commercial paper.
    - Certificate of deposit.
    - Principal reduction.
    - Preferred stocks.
    - Common stocks.
    - Convertible securities.
    - Foreign securities.
    - Rights and warrants.
    - Options.
    - Government, municipal, and corporate bonds.

## INSURANCE SYSTEMS OF AMERICA, INC.

### COMPANY BACKGROUND

- Insurance Systems of America was founded in 1969 to provide software products, processing, and professional services to the insurance industry. It is owned by the following 15 insurance companies:
  - Aetna Insurance Company.
  - Aetna Life and Casualty.
  - American General Insurance Company.
  - American United Life Insurance Company.
  - California - Western States Life Insurance Company.
  - Capital Holding Company.
  - Life Insurance Company of Georgia.
  - Maccabees Mutual Life Insurance Company.
  - Mutual Benefit Life Insurance Company.
  - Mutual of New York.
  - Paul Revere Life Insurance Company.
  - Provident Life and Accident Insurance Company.
  - Southland Life Insurance Company.
  - United Benefit Life Insurance Company.
- Revenues have grown at a compound annual average growth rate of approximately 42% since founding. Between 1975 and 1978, revenues increased at an annual average growth rate of approximately 51% from \$3.3 million to \$11.5 million. Fiscal 1979 revenues are projected to reach \$18 million, 51% above 1978 revenues.
- In 1976, ISA completed its acquisition of Executive Management Software and Services (EMSS) of Cedar Rapids, Iowa. When acquired, EMSS had annual revenues of approximately \$1 million and sold software products.
- Revenues from the banking industry represent 1% of total corporate revenues. Management felt this might grow, but it would always be a minor concern.
- ISA's other products are:
  - ISA/Automated Letter Preparation system.
  - ISA/Cash Disbursement system.
  - ISA/Claim Payment system.
  - ISA/Corporate Model system.
  - ISA/EXTRACTO system.
  - ISA/Pension Proposal and Administration system.
  - ISA/V-4 Casualty Insurance system.
  - ISA/Accounting, Budget and Cost system.

## INSURANCE SYSTEMS OF AMERICA, INC.

### IMPACT ON CITITRAN

- ISA is a software products company. Banking involvement is minimal. They are not competitive to CITITRAN nor are they likely to be.

INTERACTIVE SCIENCES CORPORATION  
60 Brooks Drive  
Braintree, MA 02184  
(617) 848-2660

President: Alfred Jorgensen  
Ownership: Private  
Revenues: \$5.5 million (1978)  
(INPUT estimate)  
Employees: 84

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## PROFILE

- Banking Industry Revenues

- \$825,000 (15% of total revenues).

- Type Of Banking Services

- Processing services 100%
- Interactive
- Batch

---

100%

- Banking Industry Specialization

- Commercial banks and brokerages.

- Major Clients

- Company refused to provide.

- Major Competitors

- Company refused to provide.

- Sales Offices

- Headquarters location.
- Boston, Ma.
- New York, NY.
- Pittsburgh, PA.
- Washington, DC.
- Worcester, MA.

- Employees

- Marketing 30
- Professional services 15
- Computer operations 30
- Administrative 9

---

Total personnel 84

## INTERACTIVE SCIENCES CORPORATION

- Geographic Concentration
  - Illinois, New York, New Jersey, and Pennsylvania.
- Data Center Locations
  - Headquarters location.
- Computer Hardware
  - Ten DEC System/10 mainframes.
  - KA and KI-10 processors.
  - TOPS-10 version 604 operating system.

## BANKING PRODUCTS AND SERVICES

- Interactive Sciences, Corporation (ISC) provides financial modeling systems and data bases for management decisions. The majority of ISC customers access the network interactively (80%). The company provides high-speed response and large on-line storage facilities.
- ISC offers three services specifically to the financial industry. These are:
  - Numerical Reporting Service (NRS): a modeling system generating financial projections based on specific initial assumptions. Assumptions can be rearranged until desired forecasts are obtained. Capabilities of the NRS system include:
    - Financial modeling.
    - Rate of return analysis.
    - Amortization and payback analysis.
    - Leave/buy analysis.
    - Depreciation analysis.
    - Risk analysis.
    - Sales analysis.
  - Basic Business Language (BBL): a financial analysis language providing management reports, financial models, and risk analysis unique to each client's needs.
    - When used with the NRS service, BBL permits the client to specify input and output formats most meaningful to their organization.
    - BBL has the capability of calculating statistics within tables of information.
    - BBL provides graphical output, internal rate of return calculations, sorting, trending, and averaging.



## INTERACTIVE SCIENCES CORPORATION

- Security Information Data Base Systems (SIDS): a computerized stock market data base containing current and historical trading information covering 18,000 stocks, bonds, mutual funds, and options. Data is updated daily. Services include:
  - INVEST: ranks the relative performance of an issue over a specified period.
  - CHARTS: produces securities charts showing high-low-close-volume plus 20-day moving averages of price and volume.
  - QPORT: gives a portfolio valuation report.
  - QSEL: lists all securities meeting a given set of criteria.
  - SCAN: scans prices or dividends for specific issues over a specific time period.
- SIDS covers the major exchanges:
  - New York Stock Exchange.
  - American Stock Exchange.
  - Chicago Board of Options Exchange.
  - Philadelphia Option Exchange.
  - Pacific Stock Exchange.
  - Midwest Stock Exchange.
  - Toronto Exchange.

## COMPANY BACKGROUND

- Interactive Sciences was incorporated in Massachusetts in 1968 as a timesharing utility. Financial applications on their network service contribute 15% of total revenues.
- Eighty percent of ISC's total revenues are derived from processing services, 15% from professional services, and 5% from the sale of software products.
- Other ISC offerings include:
  - A chemical data base developed by the National Institutes of Health and the Environmental Protection Agency to provide manufacturers with emission standards and regulatory information.
  - General business application processing and software package sales.
  - A manufacturing planning software package providing material requirements planning, order demand, product scheduling, and inventory control.
  - Professional services including system design and consulting.

## INTERACTIVE SCIENCES CORPORATION

- Manufacturing and general business software combined with DEC System/2020, Hewlett-Packard 3000, or Data General Eclipse mini-computers as turnkey systems. Sales are aimed at manufacturers with revenues between \$10 and \$50 million.
- ISC plans to concentrate overall marketing on their turnkey systems program. ISC stated they plan to expand their turnkey offerings sometime in the near future.

## IMPACT ON CITITRAN

- ISC is essentially a data base utility and operates along the same line as the Chase IDC subsidiary. The company basically provides access to large econometric and financial data bases coupled with appropriate modeling and forecasting software. It is not competitive to CITITRAN. As a DEC based utility, the company would be a synergistic acquisition for Citibanks' ICC.

INTERNATIONAL BUSINESS MACHINES  
CORPORATION  
Armonk, NY 10504

President: John R. Opel  
Ownership: Public NYSE  
Revenues: 21 billion (1978)  
Employees: 325,517

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## PROFILE

- Banking Industry Revenues

- \$2.5 billion (1978) (INPUT estimate).

- Type Of Banking Services

- Mainframe systems for all size banks 65%
- Basic software products for consumer banking applications 5
- A complete line of 3600 teller, administrative,  
data entry, MICR processing and consumer inquiry  
terminals to support banking operations 35
- 100%

- Banking Industry Specialization

- IBM specializes in central host as opposed to distributed systems for commercial bank operations.
- Finance is a major industry targeted for marketing systems.

- Major Clients

- Bank of America.
- Mellon Bank.
- Chase Manhattan.
- Citibank.

- Major Competitors

- Burroughs.
- NCR.

- Sales Offices

- Over 4,000 worldwide.

- Employees

- 325,517 worldwide.

- Geographic Concentration

- Worldwide.

## INTERNATIONAL BUSINESS MACHINES CORPORATION

- Data Center Locations

- IBM does not operate any data centers to process correspondent banking or any other computer services.

- Computer Hardware

- IBM 370 Series.
- IBM Series 38.
- IBM 4300 Series.
- IBM 8100 Series.
- IBM Series/1.

### BANKING PRODUCTS AND SERVICES

- There is every indication that IBM is giving DPD and GSD free reign to compete with each other. With system 8100 DPD can move into GSD markets, whereas the IBM System/38 allows GSD upward migration. Both announcements have significant implications with respect to selection of the IBM Series/1 for CITITRAN.
- Announcement of the IBM System/4100 adds another dimension to selling IBM in-house systems in banking markets targeted by CITITRAN.
- Incorporation of large capacity disks, relational database firmware, and dual capacity diskettes in these new product announcements make them potentially highly competitive with the larger Series/1 configuration specified for CITITRAN.

### COMPANY BACKGROUND

- IBM is the major supplier of in-house systems in within the banking industry.
- IBM currently supplies over 40% of, installed mainframes in small to medium size banks and over 70% for large and very large banks.
- IBM worldwide revenues are growing at a AAGR of 15%, rising from \$14 billion in 1975 to \$21 billion in 1978.

## INTERNATIONAL BUSINESS MACHINES CORPORATION

### IMPACT ON CITITRAN

- IBM is a direct competitor to CITITRAN. The company holds a 40% market share of installed mainframes in the primary small to medium size banks marketplace. IBM will defend its in-house installations.
- For this reason INPUT did not count on direct replacement of IBM in-house systems by CITITRAN in its analysis of market potential for CITITRAN.



INTERNATIONAL MICOR  
3838 East Van Buren  
Phoenix, Arizona 85008  
(602) 273-4111

President: Al Munyon  
Ownership: Subsidiary of Ramada  
Inns  
Revenue: \$10 million (1978)  
(INPUT estimate)  
Employees: 600

---

## PROFILE

- Banking Industry Revenues

- \$500,000 (5% of total revenues).

- Type of Banking Services

- Processing services 100%
- Remote Computing (100%)
- 100%

- Banking Industry Specialization

- Commercial banks only.

- Major Clients

- Company declined.

- Major Competitors

- Company declined.

- Sales Offices

- Lincoln, Nebraska.

- Employees

- Total personnel: 600
  - Marketing 10
  - Customer support 215
  - Computer operations 300
  - Administrative 75
- Total Banking personnel: 10
  - Administrative 1
  - Computer operations 9

## INTERNATIONAL MICOR

- Geographic Concentration
  - Nebraska.
- Data Center Locations
  - EFT switching center located in Lincoln, Nebraska.
- Computer Hardware
  - Tandem switching equipment.

## BANKING PRODUCTS AND SERVICES

- International Micor's only involvement in the banking industry is the operation of an electronic fund switching facility in Nebraska. State law prohibits direct electronic transfer of funds from one bank to another; therefore, Micor acts as the intermediary. Micor performs the functions of a small automated clearing house, making electronic fund transfers possible.
- At the present this is a limited venture; Micor is unsure of what direction EFT processing will go.

## COMPANY BACKGROUND

- International Micor is owned by Ramada Inns and handles all their reservations needs. Their on-line reservations system is used by Quality Motels, the American Chain, Best Western, and Day's End.
- International Micor manufacturer the terminals used in their systems. These are installed in over 1500 locations nationwide.
- Micor also combines their terminals with a Texas Instruments minicomputer and a General Electric printer to form a hotel turnkey system for reservations and general in-house data processing.
- Micor recently received at \$7-10 million Blue Cross contract to install a processing network.
- Micor has the capability to develop a banking turnkey system but does not have any plans in the near future to do so.



## INTERNATIONAL MICOR

### IMPACT ON CITITRAN

- Micor began as a wholly owned subsidiary of Ramada Inns, originally established to handle the hotel reservations network. The establishment of the network led the company to seek other applications that could utilize the network facilities, one of which was EFTS. The company has been unprofitable and recently released almost the entire top management staff. It's future as a competitive computer services company is at best uncertain.



KAMAN SCIENCES CORPORATION  
1500 Garden of the Gods  
Colorado Springs, CO 80907  
(303) 599-1500

President: Albert Bridges  
Ownership: Subsidiary of Kaman  
Corporation  
Revenues: \$24 million (1978)  
Employees: 600

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## PROFILE

- Banking Industry Revenues
  - \$2 million (8% of total revenues)
- Type Of Banking Services
  - Processing services 100%
  - Remote computing (28%)
  - Interactive
  - Remote batch
  - Batch services (72%)
  - \_\_\_\_\_
  - 100%
- Banking Industry Specialization
  - Commercial banks.
- Major Clients
  - Company refused to provide.
- Major Competitors
  - Colorado Computer Center.
  - First National Bank of Denver.
- Sales Offices
  - Headquarters locations.
- Employees
  - Total personnel 600
  - Data processing division
    - Marketing 6
    - Customer support 25
    - Computer operations 94
    - Administrative 24
    - \_\_\_\_\_
  - Total data processing personnel 150

## KAMAN SCIENCES CORPORATION

- Geographic Concentration
  - Colorado.
- Data Center Locations
  - Headquarters location.
- Computer Hardware
  - Two CDC Cyber 73.
  - Six CDC tape drives.
  - Eight CDC disk drives.

## BANKING PRODUCTS AND SERVICES

- Kaman Sciences Corporation (KSC) offers six applications specifically to the banking industry. These are:
  - Demand Deposit Accounting.
  - Savings.
  - Certificate of Deposit.
  - Commercial Loan.
  - Installment Loan.
  - Visa Credit Accounting.
- Additional services include Memo Posting, EFT processing, and Automated Clearing House communication.
- Forty banks use the service in batch mode, while 15 operate on-line. Processing costs are calculated by service type, transaction volume, and number of accounts.

## COMPANY BACKGROUND

- Kaman Sciences Corporation (KSC) was founded as Kaman Nuclear, a division of Kaman Corporation's subsidiary Kaman Aerospace. In 1968 Kaman Nuclear was incorporated as Kaman Sciences, a separate subsidiary of Kaman Corporation.
- The parent, Kaman Corporation, was founded in 1950 and specializes in computer services, aviation, music, aerospace, and bearings.

## KAMAN SCIENCES CORPORATION

- KSC has three operating divisions:
  - Computer Processing Division: provides processing to banks, medical institutions, manufacturers, distributors, radio and television stations.
  - Products Division: produces aviation instruments.
  - Science and Technology Division: provides research and development for the parent, Kaman Corporation.
- KSC banking revenues represent 8% of the total. Improved on-line banking services for 1979 are planned. However, the company would not provide further details.

## IMPACT ON CITITRAN

- Kaman Sciences is probably the largest independent services firm in Colorado. Although banking activities are small, KSC has the potential of becoming the leading processor for banks as well as other industry groups in their geographical region.



KEANE ASSOCIATES, INC.  
210 Commercial Street  
Boston, MA 02109  
(617) 742-5210

President: John F. Keane  
Ownership: Public (Boston Exchange)  
Revenues: \$11.1 million (1978)  
Employees: 420

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## PROFILE

- Banking Industry Revenues

- \$1.54 million (14% of total revenues).

- Type Of Banking Services

- Professional services 100%

- Banking Industry Specialization

- Commercial banks and trust companies.

- Major Clients

- Boston Safe Deposit Trust Company.
- Federal Reserve Bank.
- First National Bank.
- Fidelity Bank.
- Hospital Trust Corporation.
- Manufacturers National Bank.
- Savings Bank Life Insurance Fund.

- Sales Offices

- Boston, MA; Chicago, IL; Devon, PA; Glastonbury, CT; Marlboro, MA; Manchester, NH; New York, NY; Oak Brook, IL; Rumford, RI; Totowa, NJ; Troy, MI; Washington, DC; Wellesley, MA; Westport, CT.

- Employees

- |                                      |           |
|--------------------------------------|-----------|
| - Marketing                          | 20        |
| - Software and professional services | 340       |
| - Computer operations                | 10        |
| - Administrative                     | <u>50</u> |
| Total personnel                      | 420       |

- Geographic Concentration

- New England states, Middle Atlantic states, and North Central states.

## KEANE ASSOCIATES, INC.

- Data Center Location
  - Headquarters location.
- Computer Hardware
  - One IBM System/3.

## BANKING PRODUCTS AND SERVICES

- Keane Associates provides contract programming, systems design, testing, and implementation, and management consulting to the banking industry. To date, Keane has served over 60 banking institutions.
- Keane has developed a considerable amount of expertise in developing custom distributed processing system. This experience has made them one of the primary consulting firms in bank DDP applications. Banking application system design experience includes the following:
  - Demand Deposit Accounting.
  - On-line/Off-line Savings.
  - Shareholder Accounting.
  - Commercial Loan Accounting.
  - Installment Loan Accounting.
  - Funds Transfer.
  - Personal Trust.
  - Corporate Trust.
  - Mortgage Accounting.
  - Check Reconciliation.
  - Stock Transfer.
  - Credit Card Accounting.
  - Central Information File.
- Keane does not offer any standard banking application packages at this time. Product literature is not available from the company.

## COMPANY BACKGROUND

- Keane Associates was incorporated in 1965 in Massachusetts to provide professional programming services. Keane presently has two operating divisions:



## KEANE ASSOCIATES, INC.

- KeaMed Division provides facilities management services to approximately 16 hospitals. Services include inpatient billing, accounts receivable, and accounts payable. This division accounts for 30% of total revenues.
- Information Services Division performs professional (consulting) services for approximately 160 clients. Specialties include computer operating systems, database systems, data communication systems, and distributed processing systems. This division accounts for 70% of total company revenues.

## IMPACT ON CITITRAN

- Keane Associates is a well-known system design/software development firm. It is not competitive to CITITRAN.



**MANAGEMENT SCIENCE AMERICA,  
INC.**

3445 Peach Tree Road, N.E.  
Atlanta, GA 30326  
(404) 262-2376

President: William Grades  
Ownership: Private  
Revenues: \$25.5 million,  
Fiscal Year End 12/78  
Employees: 500

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**PROFILE**

● Banking Industry Revenues

- \$7.65 million (30% of total revenues).

● Type Of Banking Services

- Software products 100%

● Banking Industry Specialization

- Commercial banks.
- Savings and loan institutions.
- Credit agencies.

● Major Clients

- Company would not provide.

● Major Competitors

- Competition varies according to specific product:
  - Payroll: Wang.
  - Personnel Management: INSCI.
  - General Ledger: University Computing.

● Sales Offices

- Regional: Englewood Cliffs, NJ; Chicago, IL; Atlanta, GA; and Los Angeles, CA.
- District: Boston, MA; Washington, DC; Columbus, OH; San Francisco, CA; Seattle, WA; Houston, TX; Dallas, TX; and Philadelphia, PA.
- Canada: Winnipeg; Toronto and Montreal.
- International: Sydney, Australia; London, U.K.; and Brussels, Belgium.

## MANAGEMENT SCIENCE AMERICA, INC.

- Employees

-	Marketing sales	55
-	Product development	250
-	Technical support	100
-	General and administrative	<u>95</u>
	Total Employees	500

- Geographic Concentration

- Clients are located throughout the United States, with slight concentrations in the North East, Mid-West, and Canada.
- International business accounts for 10% of total revenues with clients in Europe and Australia.

- Computer Hardware

- One IBM 158 with a DOS operating system.

## BANKING PRODUCTS AND SERVICES

- In 1978 Management Science America, Inc. derived 30% of its total revenues from the banking industry.
- Management Science America, Inc.'s business is entirely derived from designing, developing and marketing financial and administrative software packages for various industries. The company provides the banking community with the following products:
  - Payroll was introduced in 1970 and currently has 950 users. The pricing information for this and subsequent products was not provided by the company because of variances in hardware, operating systems, and specific options required by clients.
    - Payroll calculates the salaries of exempt and non exempt employees. It withholds taxes, calculates and processes deductions and other earnings. MSA stresses the flexibility of this system which operates in batch and on-line modes.
  - General Ledger/Financial Information and Control (FICS) system which has 600 users was developed in 1971. This is an industry independent system with specialized options for the financial industry. General ledger is a modular system which includes general ledger posting, budgeting, and planning. Specific applications include U.S. foreign currency conversion, cash flow modeling, and variable budgeting.

## MANAGEMENT SCIENCE AMERICA, INC.

- FICS is designed to assist commercial banks and thrift institutions, such as savings and loans and credit unions, with their financial reporting. It includes the general ledger modules together with a specific application for fund evaluation and responsibility reporting.
  - Supplies Inventory Control and Purchasing was marketed in 1972 and has 180 users.
  - Personnel Management, introduced in 1975, now has 450 users. It has eight optional modules built around a central data base of personnel information. Options offered are ERISA benefits, job and position control, life of data history, last time/leave and absence, applicant flow, career development, labor relations and employee rating.
  - Fixed Assets, introduced in 1971 and modified in 1976, has 450 users. It calculates and records depreciation schedules, property and insurance control, and provides functions for a variety of fixed business assets.
  - Accounts Payable, which can be interfaced with a variety of general ledger software packages, was developed in 1977 and has 200 subscribers.
  - Financial Forecasting and Modeling system, was introduced in 1979 and currently has users.
- These products are offered in either an on-line or batch mode. They are designed to be compatible with all models of IBM's 360 and 370 systems, NCR, Honeywell 6000 Series, Burroughs, Univac, DEC, and Amdahl's mainframes. All products were designed by MSA.

## COMPANY BACKGROUND

- Management Science America, Inc. (MSA) was formed in 1963 by a group of Georgia Institute of Technology graduates. It has been offering products to the banking industry since 1969.
- The company was reluctant to specify any new product developments. It is the company's goal, however, to attempt to develop and market one new software system every 18 months.
- MSA derives approximately 40% of its total revenues from the manufacturing industry. Products marketed to the manufacturing sector are accounts receivable and procurement matching systems.

## MANAGEMENT SCIENCE AMERICA, INC.

- The company's ALLTAX system which calculates Federal, state and city taxes is one of the leading software packages of its kind on the market.
- Management Science maintains a team of 12 banking specialists at corporate headquarters in Atlanta who provide appropriate support to the generalized sales force.

## IMPACT ON CITITRAN

- MSA is the country's largest applications software firm (excluding IBM). Major revenues derive from its payroll package. It is not a competitor to CITITRAN nor is it likely to be.

MARQUETTE SERVICES CORPORATION  
4601 West 80th Street  
Minneapolis, MN 55437  
(612) 830-7400

President, Ron Ingersoll  
Ownership: Private  
Revenues: \$6,500,000\* FYE 12/78  
Employees: 251

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## PROFILE

- Banking Industry Revenues

- \$6,500,000\* (100% of total revenues).

- Type of Banking Service

- Processing Services
    - Remote Computing 8%
    - ..Remote Batch
    - ..Interactive
    - Batch Services 92%
- 100%

- Banking Industry Specialization

- Commercial banks.

- Major Clients

- Marquette Bank of Minneapolis and Richfield Bank & Trust.

- Major Competitors

- Midway Data Services, Minneapolis.

- Sales Offices

- Headquarters location.

- Employees

- Computer Operations 160
- Customer Service/Support 45
- General & Administrative 46

- Geographic Concentration

- Minnesota with the majority of clients in Minneapolis.

\* INPUT estimate

March 1979

INPUT

- Data Center Location
  - Headquarters.
- Computer Hardware
  - Two IBM 370/145's.

## BANKING SERVICES

- Marquette currently has 55 customers. Applications available on their service include:
  - Demand Deposit.
  - Savings.
  - Loans.
  - Mortgage.
  - Trust.
  - Bond Analysis.
  - Stock.
  - Credit Cards.

## IMPACT ON CITITRAN

- Marquette is a regional processor for small banks offering the "full" complement of commercial banking applications. In their territory, they are a direct competitor with CITITRAN.



MAY & SPEH DATA PROCESSING  
CENTER, INC.  
900 Commerce Drive  
Oak Brook, IL 60521  
(312) 325-8060

President: Albert J. Speh  
Ownership: Private  
Revenues: \$8 million (1978)  
Employees: 200

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## PROFILE

- Banking Industry Revenues
  - \$400,000 maximum (5% of total revenues).
- Type Of Banking Services
  - Processing services 100%  
Batch processing
- Banking Industry Specialization
  - Commercial banks.
- Major Clients
  - Company would not provide.
- Major Competitors
  - Xerox Computer Services.
  - Statistical Tabulating.
- Sales Offices
  - Chicago, IL.
  - Oak Brook, IL.
- Employees

- Marketing/sales	8
- Software services/ customer support	45
- Computer operations	40
- General and administrative	10
- Data entry	97
	<hr/>
	200

## MAY & SPEH DATA PROCESSING CENTER, INC.

- Geographic Concentration
  - All clients are within a 75 mile radius of Chicago, IL.
- Data Center Locations
  - Headquarters location.
- Computer Hardware
  - One IBM System/370 Model 155, OS/MVT - HASP.
  - One IBM System/370 Model 155, DOS/MVT.
  - One IBM System/360 Model 40, DOS/GRASP.
  - One IBM Prime 500 (on order, delivery expected by 8/1/79).
  - One Data General CS60 (on order, delivery expected by 8/1/79).

## BANKING PRODUCTS AND SERVICES

- May & Speh provides limited batch processing services to banks. Applications offered are bank vault billing and pension records. This service is provided to only three banks.
- May & Speh is not attempting to cultivate any new banking customers. Trust accounting services have been dropped and the company spokesman interviewed stated that 1979 revenues from the banking industry are expected to be less than 1978.

## COMPANY BACKGROUND

- May & Speh was incorporated in 1948. Until October 1, 1978, the firm had been a subsidiary of System Development Corporation. The company is now employee owned and privately held.
- The company is decreasing emphasis on banking services and is targetting the manufacturing, medical and distribution sectors.
- May & Speh plans to offer a general business software package by year end 1979. Applications offered will be accounts receivable, account payable, sales analysis and order entry. Sale price of this product is still undetermined.
- The majority of revenue growth in 1979 and 1980 will come from the sale of turnkey systems.

## MAY & SPEH DATA PROCESSING CENTER, INC.

- The system consists of Data General, Datapoint, or Prime mini-computers and in-house developed software.
- Applications offered are payroll, general ledger, accounts payable, and receivable.
- Available on a purchase basis only, price of the turnkey system ranges from \$20,000 (for Data General equipment) to \$250,000 (for Prime equipment).
- Two systems are installed in manufacturing companies. The company does not have any plans to offer a similar system to the banking industry.

## IMPACT ON CITITRAN

- May & Speh provides very limited services to banking customers. The firm is not interested in developing further banking business and probably would sell off its present customer base if it could.



**MIDCONTINENT COMPUTER SERVICES,  
INC.**

5850 South Ulster Parkway  
Englewood, CO 80110  
(303) 771-9000

President: Peter C. Lee  
Ownership: Subsidiary of MCA  
Corporation  
Revenues: \$4.8 million Fiscal Year  
End 12/78  
Employees: 110

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**PROFILE**

● Banking Industry Revenues

- \$4.8 million (100% of total revenues).

● Type Of Banking Services

- Processing services 100%

● Banking Industry Specialization

- Savings and loan institutions.
- Mutual savings banks.

● Major Clients

- Majestic Savings Bank, Denver.
- Colombia Savings and Loan, Denver.

● Major Competitors

- Total Systems, Inc., Houston.
- Comac, Oklahoma City.

● Sales Offices

- Denver, CO.
- Seattle, WA.

● Employees

- |                       |           |
|-----------------------|-----------|
| - Marketing/sales     | 4         |
| - Software services   | 40        |
| - Computer operations | 40        |
| - General             | <u>26</u> |
| Total employees       | 110       |

## MIDCONTINENT COMPUTER SERVICES, INC.

- Geographic Concentration
  - East and West South Central regions.
- Data Center Locations
  - Denver, Tuscon, Wichita, and Seattle.
- Computer Hardware
  - Two Burroughs 480s, one each of Burroughs 470 and 380 with MCP operating system. One DEC PDP 11/40 front end processor, eight tape drives, four printers and twelve disk drives.

## BANKING PRODUCTS AND SERVICES

- In 1978 Midcontinent Computer Services, Inc. (MCCS) derived 100% of its total revenues from the banking industry. It is anticipated that 1979 revenues will be in excess of \$6.5 million.
- The company provides remote computing processing services via leased lines, offered entirely in an interactive mode. The network covers 16 states and uses DEC PDP 11/40 teleprocessing software.
- MCCS offers a full and varied range of applications packages which were developed by the company for savings and loan institutions.
  - MCCS has over 130 on-line clients who pay monthly fees of \$700 to \$60,000 depending on the size of operation. Services provided include:
    - Savings, which covers over 2 million accounts; mortgage having 350,000 accounts; and consumer loans with 60,000 accounts.
    - Other applications provided are general ledger, preauthorized payments, installment loans, construction loans, loan document preparation, and on-line statement account history.
  - The majority of MCCS clients use their full range of application services. The company provides data processing services to both large and small institutions.

## COMPANY BACKGROUND

- MCCS was formed in 1970 and has been offering services to the banking industry since its inception. Its range of services makes it one of the leading on-line savings and loan processing services vendors.

## MIDCONTINENT COMPUTER SERVICES, INC.

- Areas of weakness seem to center on network switching control of new accounts into the central information file.
- MCCS acquired its data center in Tucson, Arizona in 1978 from Home Federal and Savings Bank.

## IMPACT ON CITITRAN

- Midcontinent is a regional (Mountain states) S&L processor. It is not a potential competitor to CITITRAN.





**NCR CORPORATION**  
1700 South Patterson Blvd.  
Dayton, OH 45479  
(513) 449-2000

President: C. E. Exley, Jr.  
Ownership: Public, NYSE  
Revenues: \$2.61 billion (1978)  
Employees: 68,000

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## PROFILE

### ● Banking Industry Revenues

-	Financial terminal systems	\$287 million
-	Computer systems	<u>277 million</u>
		\$564 million

### ● Type Of Banking Services

-	In-house mainframe systems for small to medium size banks	60%
-	Software systems for standard consumer banking applications	10
-	A complete line of teller, administrative, data entry, MICR processing, and consumer inquiry terminals to support banking operations	<u>30</u>
		100%

### ● Banking Industry Specialization

- NCR concentrates marketing efforts on transaction terminal systems. As such it specializes in the finance and retail sectors.

### ● Major Clients

- Barnett Banks of Florida.
- FNB Bank of New Orleans.

### ● Major Competitors

- IBM.
- Burroughs.

### ● Sales Offices

- 1,200 sales offices in 120 countries worldwide.

### ● Employees

- 68,000 worldwide.

## NCR CORPORATION

- Geographic Concentration
  - Worldwide.
- Data Center Location
  - NCR has 8 data centers in the U.S. which provide processing for Savings and Loan institutions. They do some, but not a significant amount of correspondent bank data processing.
- Computer Hardware
  - NCR has a wide range of architecturally compatible processing systems suitable for retail banking applications. The designated 8000 Series starts with the 8130 micro mini and reaches to the large scale 8670.

## BANKING PRODUCTS AND SERVICES

- The NCR 7750 distributed MICR data entry system is competitive with the Burroughs 51000 Series MICR data entry systems, and has been installed in a number of small to medium size banks.
- The NCR MINI-UIPS System is a standalone mini based MICR item processing system which performs data capture, reject re-entry and proof and transit applications.
- The NCR 8000 Series processors are architecturally compatible. The I-9250 and I-8230 minicomputer have been integrated with teller terminals and application software to provide an on-line system for small banks (\$10-35 million).
- With its excellent distributed network architecture, NCR can be expected to offer distributed branch banking systems.

## COMPANY BACKGROUND

- NCR has converted itself from an old line electro-mechanical cash register and accounting machine vendor to a vendor committed to distributed electronic transaction terminals and network operations.

## NCR CORPORATION

- NCR is committed to servicing the financial and retail marketplace.
- The company currently holds a 25% market share of the medium and small size bank hardware market.
- NCR revenues are growing at an AAGR of 10% rising from \$1.8 billion in 1974 to \$2.6 billion in 1978.

## IMPACT ON CITITRAN

- NCR is a direct competitor to CITITRAN. They currently hold a 25% share of installed mainframes in small to medium size banks. While they may not be able to induce many banks to go in-house using NCR systems, they will be difficult to dislodge from the banks currently using NCR systems.
- Replacement of NCR installed systems was not considered viable in INPUT's analysis of the market potential for CITITRAN.





## NLT COMPUTER SERVICES CORPORATION

- Data Center Locations
  - Kansas City, MO.
- Computer Hardware
  - One IBM System/360 Model 40.
  - One IBM System/360 Model 50.
  - One IBM System/360 Model 60.
  - IBM 3330 disk drives.
  - Itel 2420 equivalent tape drives.
  - DOS operating system.

### BANKING PRODUCTS AND SERVICES

- NLT Computer Services Corporation provides processing services to banks from its Kansas City, Missouri data center. Their contract to use University Computing Company software restricts them to banks within 100 miles of Kansas City. NLT is presently negotiating a change in this contract.
- NLT offers six applications to the 28 banks presently using their processing services. These are:
  - Automated Teller Machines (ATM) processing.
  - Certificate of deposit.
  - Commercial loan accounting.
  
  - Demand deposit accounting.
  - General ledger.
  - Savings accounting.
- Processing is available in batch, remote batch, and interactive modes. A central information file, integrating all applications, is available to on-line users. Fees are calculated on a transaction basis, varying by processing mode and application.
- Data is transmitted from bank branches to the Kansas City data center via dedicated leased lines.
- NLT, being a full service bureau, offers many other services conceivably usable by banks. Econometric data bases and the TOTAL data base management system are presently used by client financial institutions.

## NLT COMPUTER SERVICES CORPORATION

### COMPANY BACKGROUND

- NLT Computer Services Corporation was incorporated in 1969 in Tennessee by NLT Corporation to provide complete processing services. The Kansas City data center opened in 1972 and began offering banking applications. NLT hopes to expand the area they are allowed to serve (based on the UCC contract) this year.
- NLT operates additional data centers in Nashville and Philadelphia. Remote job entry centers are maintained in Memphis, Madison, Washington, and Beloit.
- NLT plans to begin Electronic Fund Transfer (EFT) services in 1979. New packages will include savings-to-checking transfer and interest on checking systems. An upgrade of the savings accounting package is also planned.
- Revenues for 1978 rose 25% over 1977 to \$20,675,000, though profits were down 16%. 1979 revenue projections by NLT management are expected to be \$31 million.

### IMPACT ON CITITRAN

- NLT is a regional processor, not likely to expand much beyond Tennessee. The firm provides DDA to local banks and seeking expansion via acquisition. If successful, it could become competitive to CITITRAN beyond its present restricted bounds.





**NATIONAL COMPUTER SYSTEMS (NCS)**  
4401 W. 76th Street  
Minneapolis, MN 55435  
(612) 830-7600

President: Harlan R. Ward  
Ownership: Public  
Revenues: \$25 million (1978)  
Employees: 450

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## PROFILE

- Banking Industry Revenues
  - \$1 million (4% of total revenues) (INPUT estimate).
- Type of Banking Services
  - Turnkey systems 100%
- Banking Industry Specialization
  - Bank trust departments, small to medium size.
- Major Clients
  - Small to medium size commercial banks having between 500 and 2,000 accounts.
- Major Competitors
  - SEI Corporation.
  - Shear Development Corporation.
  - Comshare.
- Sales Offices
  - Company operates by direct customer contact from principal offices.
- Employees
  - Total company personnel 450
    - Financial systems (trust) 45
    - OCR and data entry systems 315
    - Educational services 90
  - Financial services: 45
    - Marketing 10
    - Support 10
    - Development 25

## NATIONAL COMPUTER SYSTEMS (NCS)

- Geographic Concentration

- NCS supplies systems throughout the U.S. The trust system is a recent announcement (1978).

- Data Center Locations

- NCS has a data center using a CDC CYBER system for batch processing of OCR data (primarily for educational institutions). The data center is not involved in the trust turnkey system.

- Computer Hardware

- The trust system uses a:
  - TI 990/10 CPU with 64k memory.
  - TI 911 CRT terminals.
  - CPL COMP 50 to 200mb disks.
  - CDC 300 to 600/pm printer.
  - TI tape drive.

## BANKING PRODUCTS AND SERVICES

- NCS is offering a personal trust system, Trustware, as a turnkey system to small to medium size bank trust departments. The system provides for on-line data entry, on-line inquiry, and real time file maintenance. The system handles between 500-2,000 trust accounts, and leases for \$5K/month on a 5 year lease including maintenance.
- NCS currently maintains its own OCR systems and intends to maintain the Trustware hardware configuration.

## COMPANY BACKGROUND

- NCS was founded in 1970 with the objective of providing OCR and data entry services for performance measurement and educational accountability.
- In October 1976 NCS acquired Data Input and in 1977 Trust Automation Consultants, Inc. In 1978 NCS announced Trustware.

## NATIONAL COMPUTER SYSTEMS (NCS)

### IMPACT ON CITITRAN

- INPUT believes that NCS will have difficulties with Trustware, particularly in the area of equipment maintenance. However, by selling minicomputer systems to bank trust departments, this will increase the potential of selling CITITRAN minicomputer systems on the commercial side.



## NATIONAL DATA CORPORATION

One National Data Plaza  
Corporate Square  
Atlanta, GA 30329  
(404) 329-8500

President/CEO: L. C. Whitney  
Ownership: Public, OTC  
Revenues: \$35.8 million Fiscal Year  
End 5/31/78  
Employees: 1,600

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### PROFILE

- Banking Industry Revenues

- \$17.9 million (50% of total revenues).

- Type Of Banking Service

- Processing services 100%
- Interactive           
100%

- Banking Industry Specialization

- Commercial banks.
- Savings and loan institutions.

- Major Clients

- Chase Manhattan Bank.
- Chemical Bank.

- Major Competitors

- Banks offering credit card authorization and billing.
- Tymshare.
- Rapidata.
- Bank Associations.

- Sales Offices

- New York, NY.
- Pittsburgh, PA.
- Chicago, IL.
- Worcester, MA.
- Atlanta, GA.
- Los Angeles, CA.

## NATIONAL DATA CORPORATION

- San Francisco, CA.
- Washington, DC.
- Portland, OR.
- Boston, MA.
- Braintree, MA.
- Toronto, OT.

### ● Employees

- Marketing/sales	125
- Software services/ customer support	200
- Computer operations	125
- General and administrative	100
- Regional communications centers	<u>1,050</u>
	1,600

### ● Geographic Concentration

- Clients are concentrated in the key financial centers, primarily Chicago, New York, Boston, and San Francisco.

### ● Data Center Locations

- Headquarters location (primary center).
- Boston, MA (secondary center).

### ● Computer Hardware

- Sixteen mainframes (IBM 370 and Univac 1100).
  - Ten mainframes in primary data center.
  - Six mainframes in secondary data center.
- Several hundred minicomputers including:
  - DEC.
  - Texas Instruments.
  - Data General.
- Several hundred terminals:
  - CRT terminals used at regional communications centers are primarily Univac and Texas Instrument units.

## NATIONAL DATA CORPORATION

### BANKING PRODUCTS AND SERVICES

- Cash Management Services provided to the banking industry include:
  - Bank Deposit Reporting Service: reports daily status of deposits made in a local bank by each reporting outlet of a customer. Approximately 150 banks market this service to their customers.
  - Bank Balance Reporting Service: enable customers of participating banks to receive daily bank balance information so that cash management decisions can be made rapidly. Approximately 300 banks participate in this service.
  - Money Transfer Service: allows customers to initiate wire transfers through banks by terminals located at the customers' places of business. Instructions are forwarded by terminal to the sending bank for immediate processing. Three major banks are currently subscribing to this service.
  - Information Reporting Service: provides for the reporting of management information on a daily or less frequent basis from customer outlets. The information is compiled and transmitted to the customer. This service is used by a large Canadian bank to facilitate transfers of funds among its branches.
- A substantial portion of the company's cash management services are provided through ten major participating banks.
- Credit Card Authorization services are provided to nine banks, through National Data Corporation's data entry service.
- Through a joint arrangement with a Southeastern bank, the company markets a bank credit card authorization and billing system. Under this arrangement, the Southeastern bank provides the credit card billing and accounting portion of the service, and National Data provides the authorization and data entry components of the system. The system is capable of processing both MasterCharge and VISA credits. A total of 25 bank customers presently use this service.
- In support of its Cash Management and Credit Card Authorization services, National Data operates six regional communications centers which have a combined staff of between 600 and 800 operators. Each center has over 150 operator stations which handle incoming WATS calls. Each station contains a CRT computer terminal which the operators use to give an immediate response to the caller. The communications centers are located in:

## NATIONAL DATA CORPORATION

- Atlanta, Ga.
  - Westchester, IL.
  - Cherry Hill, NJ.
  - Toronto, OT.
  - Irvine, Ca.
- National Data offers interactive services to its users over networks provided by:
    - Comshare.
    - General Electric Information Systems.
    - Interactive Sciences Corporation (a subsidiary).

## COMPANY BACKGROUND

- National Data Corporation is a Delaware corporation which was formed in 1967.
- The company operates principally in two business segments: data processing and facilities management.
- Data processing services include credit card charge authorization and credit card processing services, a merchandise ordering service, a hotel/motel reservation service, and health care services.
- Facilities management services include all phases of credit card billings for Atlantic Richfield Company (the primary FM client), airlines, retail firms, petroleum firms and other national companies.
- National Data Corporation has recently completed the acquisition of Interactive Sciences Corporation of Braintree, MA, a timesharing and cash management firm. INPUT estimates Interactive Sciences banking revenues were \$825,000 in 1978.

## IMPACT ON CITITRAN

- NDC is the largest independent credit card processor. As such, it offers cash management facilities to banks. It is not competitive to CITITRAN.



NATIONAL SHAREDATA CORPORATION  
9330 Amberton Parkway, Suite 250  
Dallas, TX 75243  
(214) 238-7308

President: Charles Scott  
Ownership: Subsidiary of Western  
Union Teleprocessing Group  
Revenues: \$30.5 million (estimate)  
Fiscal Year End 12/78  
Employees: 1,200 (estimate)

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## PROFILE

- Banking Industry Revenues
  - \$28.9 million (an estimated 95% of total revenues).
- Type Of Banking Services
  - Processing services 100%
- Banking Industry Specialization
  - Commercial banks.
- Major Clients
  - Liberty National Bank - Oklahoma City.
  - Citizen's Bank of Sheboygan.
  - Security National Bank - Detroit.
  - Connecticut National Bank - Bridgeport.
- Major Competitors
  - University Computing Company
  - Electronic Data Systems.
  - Systematics, Inc.
- Sales Offices
  - At all data center locations.
- Employees

- Marketing sales	80
- Systems/Programming	200
- Production	780
- General/Administrative	<u>140</u>
Total employees	1,200 (estimate)

## NATIONAL SHAREDATA CORPORATION

- Geographic Concentration

- Clients for the most part are located close to the computer centers and in major metropolitan areas.

- Data Center Locations

- There are 41 computer centers: two in California, one in Connecticut, eleven in Illinois, five in Indiana, three in Kansas, three in Michigan, one in Nevada, four in Oklahoma, eight in Texas, and three in Wisconsin.

- Computer Hardware

- There are 52 computer systems which include IBM systems 360/40, 360/50, 360/145, and 370/145; Burroughs B3500 and B4700; one NCR 399 and one NCR 200; and one Cummins Allison CA3400.

## BANKING PRODUCTS AND SERVICES

- National Sharedata has established a national network of data processing centers which share programs and resources to address the data processing needs of the banking industry.

- The company provides a facilities management (FM) arrangement for banks with in-house computers and an automated customer service for others. It derives 95% of its total revenues from this sector. Under FM contracts, typically of two to five years in duration and averaging \$3 million per contract, the company assumes control for the entire operation of a bank's data processing department. Its 1,500 clients range in assets from \$2 million to over \$2 billion.

- The company believes that this arrangement will not only reduce the user's cost of data processing but increase the efficiency of operations.
- Applications include management reporting systems and automated general ledger, budgetary accounting, demand deposit accounting, savings, installment loans, commercial loans, and certificates of deposit. Clients access these services via leased lines, or use the facilities of the nearest batch service bureau.

## NATIONAL SHAREDATA CORPORATION

- In 1974 the company began development of the Sharedata On-Line Information System (SOLIS). It was offered in 1976 as part of the company's overall services. SOLIS provides Sharedata banks with a flexible software system which incorporates the bank's base accounting system as a bridge to new asset, financial and executive management systems. The client may choose to use their own in-house accounting system or Sharedata's. Either accounting system is functional with the on-line Customer Information System (CIS).
- National Sharedata also offers electronic Funds Transfer System (EFTS) with automated teller machines, POS, and check guarantee, and verification services under the SOLIS umbrella.

## COMPANY BACKGROUND

- National Sharedata Corporation, which became a wholly owned subsidiary of Western Union in August 1973, was founded in February of 1969 by Daniel B. Stuart, now Vice-Chairman of the Board. Starting with one bank in 1969, National Sharedata has grown to a network of computer centers ranging from California to Connecticut.
- National Sharedata pioneered the facilities management (FM) concept within the banking industry and is still the leading computer services firm in this field.

## IMPACT ON CITITRAN

- National Sharedata is probably the largest bank facilities management firm. It is competitive to CITITRAN in that it often has the decision making authority to decide which systems are used by its customers. The company could be considered a potential "OEM" customer for CITITRAN.



ON-LINE SYSTEMS, INC.  
115 Evergreen Heights Drive  
Pittsburgh, PA 15228  
(412) 931-7600

President: Jack Roseman  
Ownership: Public (AMEX)  
Revenues: \$22,618,507  
(FYE 4/30/78)  
Employees: 500

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## PROFILE

- Banking Industry Revenues

- \$1.99 million (9% of total revenues).

- Type Of Banking Services

- Processing services 90%
  - Interactive (98%)
  - Facilities Management (2%)
- Professional services 10%
- 100%

- Banking Industry Specialization

- Commercial banks and savings and loan.

- Major Clients

- American Banking Association.
- First National Bank of Chicago.
- Marine Midland Bank.
- Mellon Bank.

- Major Competitors

- CompuServ, Inc.
- Computer Services Corporation.
- General Electric Information Services Division.
- National CSS, Inc.
- Tymshare, Inc.

- Sales Offices

- Arlington, Atlanta, Baltimore, Boston, Buffalo, Chicago, Cleveland, Clifton, Dallas, Denver, Detroit, Elmira, Ft. Worth, Kansas City, Long Island, Los Angeles, Milwaukee, New York, Philadelphia, Pittsburgh, Rochester, San Antonio, San Francisco, Silver Springs, St. Louis, Seattle, Washington.

## ON-LINE SYSTEMS, INC.

- Banbury, Birmingham, Bristol, Calgary, Cardiff, Epsom, Fareham, Halifax, Leeds, London, Loughborough, Manchester, Middleborough, Montreal, Newcastle, Sheffield, Swindon, Toronto, Vancouver, Warrington, Winnipeg.

### ● Employees

-	U.S. personnel		
	.	Marketing	50
	.	Computer operations	140
	.	Professional services	90
	.	Administrative	20
			<hr/>
	Total U.S. personnel		300
-	European personnel		
	.	Marketing	30
	.	Computer operations	100
	.	Professional services	60
	.	Administrative	10
			<hr/>
	Total European personnel		200

### ● Geographic Concentration

- Areas surrounding Chicago, Dallas, London, Los Angeles, New York, and Washington, D.C.

### ● Data Center Locations

- Headquarters location.
- London, United Kingdom.

### ● Computer Hardware

- Seventeen DEC System 10 mainframes.
- Fifty DEC PDP-11 minicomputers.
- DEC-Modified customized operating system.

## BANKING PRODUCTS AND SERVICES

- On-Line Systems, Inc. (OLS) offers six information processing and reporting systems to the banking industry on their network. These on-line services are:
  - OLIVER: a conversational information retrieval system for bank trust, loan, savings, personnel, mortgage leasing, planning, and operations departments. The package will track and report on any information in the data base. OLIVER also has two subsystems:

## ON-LINE SYSTEMS, INC.

- ORACLE, a bank financial modeling system providing projections for new customer profitability, branch performance, financial growth, etc.
  - Municipal Bond Underwriting, a bond bidding system which establishes the coupon schedule for new issues. The package will determine the optimum set of coupons for producing a low net interest cost.
  - OASES (On-Line's Accessable Securities System): a securities data base system with information on 30,000 security issues traded on U.S. and Canadian exchanges. Price, dividend, and interest information is updated nightly and retained for two and one half years. Subroutines include:
    - EXAM, provides information about debt issues whose yield-to-maturity is negative. Issues are coded by the Moody Financial Quality System.
    - SCAN, prints a report containing all historical information on individual issues in the data base.
    - DIRECT, creates a directory of all securities in the data base.
    - Seventeen other subroutines are available.
  - OPAL (On-Line's Portfolio Analysis Library): a library of analysis programs which perform investment bookkeeping, security transaction calculation verification, investment income calculation, capital gain and loss reporting, money market evaluation, and end of period valuation. Reports include bond interest earned, capital gain and loss, dividends earned, portfolio valuation, and discounts earned.
  - OSCAR: a project, personnel, and financial modeling system promoting the efficient use of an institution's resources. The package helps to analyze staff and machine capabilities and monitor branch cost and efficiency.
  - OLS/FMS (On-Line System's Financial Modeling System): a financial model providing spread sheet analysis, budget-performance measurement, statistical analysis, graphic reporting, market simulation, venture planning, merger and acquisition review, and profit-loss analysis.
  - NBER Econometric Time-Series Data Base: a historical data base providing information in the areas of finance, industry, population, and national statistics. Financial data includes information on bank assets, exchange rates, securities prices indexes and the stock market, the federal money supply, money market rates, consumer credit, and U.S. balance of payments.
- OLS Transmits data on a combination of leased, WATS, and Tymnet lines serving over 200 cities world-wide. DEC PDP-11 minicomputers are installed at 20 relay stations and at corporate headquarters as communications controllers.

## ON-LINE SYSTEMS, INC.

- The company refused to provide any specific information relating to the number of banking clients, usage of each package, or billing fees.

## COMPANY BACKGROUND

- On-Line Systems was incorporated in 1967 in Delaware as a computer services vendor offering interactive processing. OLS is now a world-wide operation with subsidiaries in Canada (OLS Computer Services Canada Ltd.) and in the United Kingdom (Atkins On-Line Ltd.). Computer services are also offered in the Netherlands. There are presently six operating divisions: Operations and Engineering Division, Corporate Development and Administration Division, Sales Division, Marketing Division, Software Division, and Special Projects Division.
- In 1978 OLS acquired Dynabank Corporation, an Atlanta firm owned cooperatively by the First National Bank of Atlanta, Continental Illinois Bank and Trust Company of Chicago, Mellon Bank, and First National Bank of Dallas. This acquisition gave OLS the OLIVER package and Dynabank's 250 clients.
- OLS does not presently sell or license software, however, such services are being seriously considered for 1979.
- OLS has agreed in principal to be acquired by United Telecommunications, Inc. a diversified holding company based in Kansas City. The agreement is subject to OLS shareholder and government approval. OLS would become a subsidiary of United Computing Systems, which is a subsidiary of United Telecommunications. OLS also stated they have dropped negotiations aimed at acquiring Datatab, Inc., a processing services vendor.

## IMPACT ON CITITRAN

- On-Line Systems is a well-known mid-size general-purpose time sharing vendor. The pending merger with UCS takes them out of the arena as an acquisition candidate. In INPUT's view, under UCS management and guidance it is unlikely that OLS will do much (in the next few years, at least) to increase penetration into the banking industry.



**PAN AMERICAN SYSTEMS CORPORATION**

110 East Morse Blvd.  
Winter Park, FL 32789  
(305) 647-1588

President: Jerry Rish  
Ownership: Private  
Revenues: \$3.5 1978  
(INPUT estimate)  
Employees: 20

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**PROFILE**

- Banking Industry Revenues
  - \$3.5 million (INPUT estimate) (100% of total revenues).
- Type of Banking Services

- Software Products	50%
- Turnkey Systems	<u>50</u>
	100%
- Banking Industry Specialization
  - Commercial banks and savings and loan institutions.
- Sales Offices
  - Headquarters locations.
- Employees

- Marketing	1
- Software services	<u>19</u>
Total personnel	20
- Geographic Concentration
  - Products are marketed throughout the United States.

**BANKING PRODUCTS AND SERVICES**

- Pan American Systems (PAS) markets a software control package (PASCP) designed for bank electronic fund transfers on a minicomputer. Software provided includes control of peripherals and communications to a larger computer.
- An on-line application package, PAS MEMO SYSTEM, is also available for use at the point of sale by retail merchants and with teller terminals by financial institutions. Applications performed by the MEMO SYSTEM are:

- A. Check cashing
    - . Check cashing transactions.
    - . Cash amount of purchase (AOP).
    - . Cash AOP with cash back.
    - . Issue temporary check cashing card.
    - . Cash AOP check with temporary card.
  - B. Financial
    - . Deposits.
    - . Balance inquiry.
    - . Withdrawal.
    - . Transfer of funds.
- All PAS software is leased on a three year term and renewed on an annual basis thereafter. All upgrades and enhancements to the software are included in the lease price.
  - An installation fee of \$7,500 is charged for the PASC software in addition to the monthly lease price of \$1,250. MEMO is only available as an add-on option to the PASC software. PASC with MEMO costs \$10,000 to install and has a monthly lease price of \$1,750.
  - PAS offers the PASC and MEMO SYSTEM packages combined on a Varian V-70 minicomputer as a turnkey system. System costs are priced at \$100,000 for a single system and \$190,000 for a double system. The software is priced separately.
  - PAS has sold 28 turnkey systems to date. Sixteen companies are currently leasing the software.

## COMPANY BACKGROUND

- Pan American Systems is a privately owned firm, established in 1969. The PASC software was developed that same year, with turnkey systems becoming available in 1974.
- PAS does very little marketing, forcing potential clients to seek them out.

## IMPACT ON CITITRAN

- Pan American Systems is a small turnkey system house offering banking software packaged with minicomputers for EFTS and other banking applications. The company has an extremely high sales/personnel ratio and might be an interesting acquisition prospect. It has the potential to be a competitor to CITITRAN but is unlikely to make a significant impact without expansion oriented management.

PANSOPHIC SYSTEMS, INC.  
709 Enterprise Drive  
Oak Brook, IL 60521  
(312) 986-6000

President: Joseph A. Piscopa  
Ownership: Private  
Revenues: \$10.4 million (1978)  
Employees: 215

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## PROFILE

- Banking Industry Revenues

- \$1.2 million (11% of total revenues).

- Type Of Banking Services

- Software products 100%

- Banking Industry Specialization

- Commercial banks, savings and loans.

- Major Clients

- Company refused to provide.

- Major Competitors

- Applied Data Research
- Cullinane
- Informatics

- Sales Offices

- Atlanta, Boston, Clifton, Dallas, McLean, Rochester, San Francisco, El Segundo.

- Employees

- |                     |           |
|---------------------|-----------|
| - Marketing         | 101       |
| - Software services | 54        |
| - Administrative    | <u>60</u> |
| Total personnel     | 215       |

- Geographic Concentration

- None. Products are marketed throughout the U.S. and the world.

## PANSOPHIC SYSTEMS, INC.

- Computer Hardware

- One IBM System/370 Model 148 at headquarters location for development purposes.

## PRODUCTS AND SERVICES

- Pansophic Systems, Inc. (PSI) offers four systems software packages to users of large computer systems. These are:
  - EASYTRIEVE an information retrieval and report generating system designed for both data processing novices and experts. It is used for information retrieval, file maintenance, and correspondence management. It handles sequential, indexed sequential, and VSAM files in addition to files under Cincom's TOTAL, IBM's IMS or DL/I, and Cullinane's IDMS. It uses English-type commands and is self-documenting in file maintenance routines.
    - EASYTRIEVE supports all IBM System/360 and System/370, Amdahl and Facom M-Series, Univac Series 70, and Siemens computers running under BS-1000 and BS-2000 operating systems.
    - The perpetual license fee is \$12,500 for DOS and \$15,000 for OS. The fee includes first year maintenance, one-day training, and two sets of documentation. Maintenance cost is 10% of the current price of the product. Pansophic has installed 1,650 EASYTRIEVE packages.
  - PANEXEC a complete management reporting system consisting of over 150 fields of information to provide DP management with information about any creation, change, or status of any program in the OS or DOS executable program. Special Source Cross-Reference reports source, object, and executable programs together, giving dates and times of last maintenance and modification level numbers. Executable libraries under PANEXEC are compressed for efficient space utilization and never require reorganization, according to management.
    - System utilities circumvent operating system utilities with a new linkage editor, single-step-initiation that makes compile-line-and-go one step, and a transparent loader that eliminates the need to put JCL and job instructions on every execution of a production program.
    - PANEXEC provides up to five levels of access codes to be placed on any single library member. A security control code will lock up protected members if any attempt is made to violate access codes.

PANSOPHIC SYSTEMS, INC.

- Programmers have full power to maintain test programs, but only management can authorize production program changes or deletes. All deleted modules are maintained in a historical protection file. In PANEXEC, once a program is given production status, it can never be modified.
- The package operates on IBM System/360 Model 22, IBM System/370 Model 115 or any larger IBM machine under any IBM operating system. Since its introduction in early 1978, 250 packages have been licensed. The OS version cost from \$15,000, the DOS version from \$12,000 or rents for \$730 per month OS, \$550 per month DOS.
- PANVALET a package composed of six modules (PAN #1,2,4,6,7,8). Pan #1 is used by programmers; all other Pan modules are used by supervisory and management personnel. This helps ensure that programs are not inadvertently or deliberately destroyed. PANVALET works with English commands and provides a variety of management reports (directory listing, cross-reference, status and activity, analysis and scan/replace). It offers three levels of security access control. The six modules are:
  - Programmer's Program, for adding, updating, and editing source programs.
  - Management Program, for basic library management including library backup, protection files, directory reports, and historical files.
  - Analysis Program, for analyzing library composition and utilization by type, status, and type and user code.
  - Cross Reference Program.
  - Scan/Replace Program.
  - The package operates on IBM System/360 Model 22, IBM System 370, or any larger IBM machine under any IBM operating system. Since its introduction in 1970, 3,300 packages have been installed across all industries. The OS version costs from \$5,980, the DOS \$4,980 or rents for \$175 per month.
- PANVALET ON-LINE, the on-line version of the library management and security package described above, including T80, CMS interface and CICS controlled editor.
  - The package operates on IBM 360/22, IBM 370/115, or any larger IBM machine under any IBM operating system. the OS version costs from \$7,500, the DOS from \$5,000.

## PANSOPHIC SYSTEMS, INC.

### COMPANY BACKGROUND

- Pansophic Systems was incorporated in Illinois in 1969 to provide packaged systems software. They now market, maintain, and enhance four proprietary software packages.
- PSI software packages are targeted at large computer users rather than specific industry groups. Manufacturing clients, followed by banking and insurance clients, use PSI packages most heavily.

### IMPACT ON CITITRAN

- Pansophic is one of the larger systems software products firms. It is not competitive to CITITRAN nor is it likely to be.



## POORMAN-DOUGLAS CORPORATION

- Geographic Concentration
  - Oregon and Washington.
- Data Center Locations
  - Portland, OR.
  - Eugene, OR.
  - Seattle, WA.
- Computer Hardware
  - Two IBM System/370 Model 145s.
  - Two IBM System/360 Model 40s.
  - One IBM System/370 Model 135.
  - DOS operating system.

## BANKING PRODUCTS AND SERVICES

- Poorman-Douglas offers a Central Information File (CIF) to its banking clients. Operating only in batch mode, it includes:
  - Demand Deposit Accounting.
  - Savings.
  - Mortgage Loan.
  - Commercial Loan.
  - Personal Loan.
  - Escrow.
  - Certificate of Deposit.
  - Stockholder Accounting.
  - EFT services.
- Twelve banks use the entire package, while four use only specific applications. All client banks are small, local, independent institutions.

## COMPANY BACKGROUND

- Poorman-Douglas Corporation (PDC) was incorporated as Management Systems in 1968 to provide processing for automotive dealers throughout the U.S. In 1974 PDC expanded operations to include general business processing.



## POORMAN-DOUGLAS CORPORATION

- In 1975 management decided to grow and diversify via acquisition. Northwest Data Processing was purchased from Standard Insurance Company that year; Northwest Data and COM Northwest were subsequently acquired in 1977. These additions expanded PDC offerings into the banking, medical, distribution, and manufacturing industries.
- To better serve their banking clients PDC plans to add interactive processing services in August 1979. A leased-line network throughout Oregon and Washington is planned.
- PDC derives 33% of total revenues from the sale of Texas Instruments minicomputers. Non-banking computer processing clients include 1,400 medical clinics, 35 linen firms, and 2,000 automobile distributors.

## IMPACT ON CITITRAN

Poorman-Douglas is a fast growing regional services firm. At present, banking related business comes from savings and loan institutions. However, the company is trying to increase its penetration into the general bank area. The company has a turnkey capability relating to its auto distributor business that presumably could be applied to banking applications, although there is no evidence of any plans afoot to do so.



**PROPRIETARY COMPUTER SYSTEMS,  
INC.**

16625 Saticoy Street  
Van Nuys, CA 91406  
(213) 781-8221

President: Bill Barancik  
Ownership: Subsidiary of  
CISI-NETWORK  
Revenues: \$5.5 million (1978)  
Employees: 135

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**PROFILE**

● Banking Industry Revenues

- \$2 million (37% of total revenues) (INPUT estimate).

● Type Of Banking Services

- |                         |           |
|-------------------------|-----------|
| - Processing services   | 90%       |
| Interactive             |           |
| Batch services          |           |
| - Professional services | <u>10</u> |
|                         | 100%      |

● Banking Industry Specialization

- Commercial banks.

● Major Clients

- City National Bank of Beverly Hills.

● Major Competitors

- Bowne Information Systems, Inc.
- Scientific Time Sharing, Inc.

● Sales Offices

- Chicago, Denver, Honolulu, Houston, Phoenix, San Diego, San Francisco, and Van Nuys.

● Employees

- |                       |          |
|-----------------------|----------|
| - Marketing           | 40       |
| - Computer operations | 90       |
| - Administrative      | <u>5</u> |
| Total personnel       | 135      |

## PROPRIETARY COMPUTER SYSTEMS, INC.

- Geographic concentration

- Arizona, California, Colorado, District of Columbia, Hawaii, Illinois, and Texas.

- Data Center Locations

- Headquarters location.

- Computer Hardware

- Two IBM System/360 Model 65s.
- Twenty-six Memorex 3670 disk drives.
- Four Memorex 3671 disk controllers.
- Fifteen IBM 3420 tape drives.
- Two IBM 3803 tape controllers.
- Two IBM System/1403 Model N1 printers.
- Two IBM 3211 printers.
- IBM 2741 terminals.
- IBM 3270 display terminals.

## BANKING PRODUCTS AND SERVICES

- Proprietary Computer Systems (PCS), offers five applications specifically to the banking industry on their processing services. These are:
  - **BANKMODEL:** an on-line decision making tool for month-by-month control over assets, liabilities, and profits. This application provides modeling to measure the long term results of present or potential financial policies. PCS now has 25 clients using this service.
  - **Trust Account Fee System (PCS/TAFS):** a personal trust accounting system enhancement which unites cost, fee and profit information for each account. The application helps management set reasonable fees to insure a consistent profits on each account.
  - **Short-Term Investment Management System (PCS/STIMS):** provides daily income accruals, reports both investment holdings and participant distributions, and interacts with personal trust systems. STIMS prepares an annual investments report which meets all federal requirements.
  - **PCS/NOTECOMP:** an accounting system used in escrow, contract collection, land sale, and right-to-use programs. The package consists of 12 modules which generate operating information and various reports.

## PROPRIETARY COMPUTER SYSTEMS, INC.

- Profit Center and Departmental Performance Reporting System: produces reports on financial performance by profit center and department. It projects assets, liabilities, income, and expenses for each center and the bank as a whole.
- All financial packages are processed on-line; data is transmitted via multiplexed leased lines from cities where PCS maintains sales offices and via Tymnet services from all other locations.
- PCS also offers full on-line and remote batch processing on their PCS/COMPUTERNET. Applications include many analytic programs such as risk, cash flow, funds flow, ratio trend, spread sheet, scheduling, and data base analysis. PCS makes available extensive business and engineering libraries to network users.
- All banking applications are also sold as software products on a license basis. PCS stated that revenues from such arrangements are insignificant since virtually all clients prefer to use their processing services. Because of the highly specialized hardware and support requirements, these packages are not well suited to in-house computer systems.

## COMPANY BACKGROUND

- Proprietary Computer Systems is a privately held company incorporated in 1970 in California to provide network information services and proprietary software systems.
- PCS was the first company in the world to offer commercial services using the interactive programming language APL. In March 1979, CISI-NETWORK, Europe's largest computer network providing APL timesharing throughout England, Belgium, Germany and North Africa, acquired PCS. PCS is now part of CISI-NETWORK's growing world-wide computer system.
- Industries for which PCS has developed specific problem-solving and analytical services include banking, manufacturing, insurance, medical, and government. PCS does not presently plan any new service offerings.

## IMPACT ON CITITRAN

- Proprietary Computer Systems is an "engineering oriented" software company offering technically sophisticated modeling software based on APL. They do not and will not provide software for back-office processing and are therefore not competitive to CITITRAN.



**QUOTRON SYSTEMS, INC.**  
5454 Beethoven Street  
Los Angeles, CA 90066  
(213) 398-2761

President: Milton E. Mohr  
Ownership: Public (OTC)  
Revenues: \$39.4 million (1978)  
Employees: 540

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## PROFILE

- Banking Industry Revenues

- \$35.9 million (90% of total revenues).

- Type Of Banking Services

- Processing services 95%
- Professional services 5
- 100%

- Banking Industry Specialization

- Commercial banks and brokerages.

- Major Clients

- Merrill Lynch.
- Blyth, Eastman, Dillon and Company.
- Dun and Bradstreet.
- First Boston Corporation.
- Soloman Brothers.

- Major Competitors

- Bunker Ramo Corporation.
- GTE Information Systems.

- Sales Offices

- Boston, Cleveland, Dallas, Los Angeles, Miami, New York, Philadelphia, St. Louis, and San Francisco.

- Employees

- Marketing 21
- Customer support 150
- Computer operations 109
- Administrative 100
- Hardware manufacturing 120
- Total personnel 540

## QUOTRON SYSTEMS, INC.

- Geographic Concentration
  - Eastern states of New York, New Jersey, Pennsylvania, Connecticut, Massachusetts, and Illinois.
  - Pacific states of California, Oregon, and Washington.
- Data Center Locations
  - Manhattan, New York.
  - Fourteen satellite centers located throughout the U.S.
- Computer Hardware
  - Quotron manufactures the Quotron 801, a processor which is installed at all 2,200 locations; memory is 64K.
  - Sixteen Quotron 801 computers are installed at the main data center with two units at each satellite center.

## PRODUCTS AND SERVICES

- Quotron Systems provides securities quotations, analysis, and related information to the financial industry through its Quotron Financial Information Service - QUOTRON 800. The basic service includes hardware, maintenance, and data base access. Stock quotations are available from:
  - American Stock Exchange.
  - Boston Stock Exchange.
  - Chicago Board of Trade.
  - Chicago Mercantile Exchange.
  - Dow Jones.
  - International Commercial Exchange.
  - Kansas City Grain Exchange.
  - Midwest Stock Exchange.
  - Minneapolis Grain Exchange.
  - NASDAQ.
  - National Stock Exchange.
  - New York Cocoa Exchange.
  - New York Coffee-Sugar Exchange.
  - New York Commodity Exchange.
  - New York Mercantile Exchange.
  - New York Stock Exchange.
  - Pacific Commodity Exchange.
  - Pacific Stock Exchange.
  - Reuters.
  - Standard and Poors.
  - Winnipeg Grain Exchange.



## QUOTRON SYSTEMS, INC.

- Options available on the QUOTRON 800 system include:
  - Ticker displays.
  - Selective ticker.
  - Block trading monitor.
  - Story recall.
  - Wire service news display.
  - Interoffice messages.
  - Electronic chalkboard.
  - QUOTETYPE.
  - QUOTEVUE.
  - QUOTEBOARD.
  - QUOTELIST.
  - VUSET.
- The average client has 14 terminals installed and pays from \$18,000 to \$25,000 per year for the service and additional options.
- Professional services generate 5% of the company's total revenues. Most contracts are for customization of Quotron products.

## COMPANY BACKGROUND

- Quotron Systems, Inc. (QSI) was founded in 1957 to design and manufacture equipment and components used in remote computing. After 1960 QSI concentrated research on data base access equipment. Quotron constructed a nation-wide leased, long-line, high-speed, multiplexed network serving 42 cities and began delivering stock market information to brokerage houses and banks. This system now generates 95% of total revenues.
- QSI manufactures all equipment used with their services. The Quotron 801 processor is used in all 2,200 locations and serves as a communications device. The main data center in Manhattan uses 16 of these tied together. Each of the 14 satellite centers has two Quotron 801 units installed, including Chicago, Dallas, Cincinnati, Los Angeles, New York, and St. Louis.

## IMPACT ON CITITRAN

- Quotron's financial business is exclusively in the market quotation service. It is not a potential CITITRAN competitor.





## RAPIDATA, INC.

- Geographic Concentration
  - None. Services are marketed throughout the U.S. and the world.
- Data Center Locations
  - Headquarters location.
- Computer Hardware
  - Thirteen Honeywell 437 dual-processors.
  - Two DEC 10/705.
  - One DEC PDP-11.
  - One DEC 2020.
  - TOPS-10 operating system.

## BANKING PRODUCTS AND SERVICES

- Rapidata, Inc. offers interactive remote computing and data base services to its banking clients. Financial services include:
  - **FISCAL:** a standard financial analysis system, including data base management, capital investment analysis, cash management and forecasting, budget and performance reporting.
  - **PROBE:** a generalized data management and analysis system designed primarily for forecasting, reporting and plotting. Applications include econometric and financial analysis and market research. It has over 650 installations.
  - **TITAN:** an on-line foreign exchange trading and accounting system. Developed by State Street Bank and Trust Company of Boston, TITAN performs accounting for customer funds in foreign currency accounts, for time bills purchased, and for time deposits TITAN also monitors the bank's inventory of foreign currency and coin.
  - **MONITAU:** Rapidata on-line portfolio management system.
  - **Cash Management System:** a system for collecting, analyzing, and reporting cash management and control information. Reports include deposit concentration, bank and investment balance, and cash budget. Other specialized reports are also available.
  - **Capital Asset Management System:** a series of four systems for capital asset management.

## RAPIDATA, INC.

- - CAPBUD (Capital Budgeting), for evaluating capital projects and groups of projects.
  - CPTRAC (Capital Tracking), for tracking and controlling capital projects.
  - CPFA (Capital Project Financing Analysis), for evaluating the financial alternatives of capital projects.
  - CFA (Cash Flow Analysis), for evaluating cash flows resulting from individual capital outlays.
- DBMS-10: a generalized data base management system for sequential, tree-structured hierarchical and network structured data bases. It can be accessed through COBOL and FORTRAN as well as X2C and packaged utilities.
- Rapidata offers interactive access to numerous public and proprietary data bases, including:
  - CITIBANK ECONOMIC DATABASE: over 3,000 National Economic Data Series; updated daily.
  - FEDERAL RESERVE BANK OF SAN FRANCISCO: over 13,000 series on economic activity of financial institutions, employment, and industry sectors; updated daily.
  - INTERNATIONAL FINANCIAL STATISTICS: national economic and foreign trade data on over 150 countries and regions; updated monthly by the International Monetary Fund.
  - MARKET STATISTICS: features data published annually in Sales Management Magazine's Survey of Buying Power. Data include 108 types of demographic and economic data for each U.S. county.
  - TELERATE HISTORICAL DATABASE: over 8,000 financial interest rate, foreign exchange, and banking series; updated daily.
  - NBER (National Bureau of Economic Research) Data Base: quarterly and monthly time series used in tracking and forecasting monetary aggregates and interest rates.
  - RAPIDQUOTE Data Base: data on 12,000 securities from the major American exchanges plus the programs for accessing, reporting, and analyzing.
- All data is transmitted to the New Jersey data center on a combination of leased and WATS lines.
- Rapidata also provides professional services including systems consulting, systems design, contract programming, and minicomputer systems.

## RAPIDATA, INC.

### COMPANY BACKGROUND

- Rapidata, Inc. was formed in 1967 in New York to provide on-line processing services. They presently operate a network serving the U.S., Europe, South American, Australia, and the Far East.
- Rapidata serves several industries, with some concentration in telephone utilities. Banking, finance, industry, and government markets are also targeted.
- In 1978, revenues reached \$19.1 million, 7% above 1977 revenues of \$17.9 million, reflecting a modest growth rate in total revenues. Net income, however, rose 42% to \$1,273,071 compared to the \$899,441 recorded in 1977.
- The New York Telephone Company accounted for approximately 22% of revenues in 1978, largely associated with two long-term contracts for dedicated computer services. One of these has already expired, the other is due to terminate in late 1979. Rapidata is in the process of contract renewal negotiations with New York Telephone Company. If either contract is not renewed, Rapidata business would be adversely affected.
- In 1978 Rapidata established a minicomputer services division. An announcement concerning the product offering from this division will be issued in 1979. INPUT believes the product to be offered will be user on-site hardware services, similar to those presently available from NCSS and Automatic Data Processing.

### IMPACT ON CITITRAN

- Rapidata is a well-known medium size general purpose timesharing firm. Although a fair percentage of its business is conducted with banks, it does not offer DDA based services and is not competitive to CITITRAN. The company has been in and out of financial difficulty for several years and might be an interesting acquisition prospect for ICC, especially since many of its offerings are on DEC systems.

REMOTE COMPUTING CORPORATION  
1076 East Meadow Circle  
Palo Alto, CA 94303  
(415) 494-6111

President: C. G. Calderano  
Ownership: Private  
Revenues: \$8,563,000 (1978)  
Employees: 143

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## PROFILE

- Banking Industry Revenues

- \$4.54 million (53% of total revenues).

- Type Of Banking Services

- Processing services 100%
- Remote computing (75%)
- Interactive
- Remote batch
- Batch services (24%)
- \_\_\_\_\_
- 100%

- Banking Industry Specialization

- Savings and loan institutions and brokerages.

- Major Clients

- Buffalo Savings Bank.
- Citizens Savings and Loan.
- First Federal Savings.
- Great Western Savings.
- Home Federal Savings.
- Metropolitan Federal Savings.
- San Diego Federal Savings.
- Twin Cities Federal Savings.

- Sales Offices

- Los Angeles, CA.
- New York, NY.
- Palo Alto, CA.
- Roslyn, NY.

## REMOTE COMPUTING CORPORATION

### • Employees

-	Marketing	14
-	Customer support	57
-	Computer operations	48
-	Administrative	<u>24</u>
	Total personnel	143

### • Geographic Concentration

- Pacific States of California, Oregon, and Washington.

### • Data Center Locations

- Headquarters location.

### • Computer Hardware

- One Burroughs B7765.
- MCP operating system.

## BANKING PRODUCTS AND SERVICES

- Remote Computing Corporation (RCC) provides analytical and data base services for financial industry decision-making. Available either in an interactive or batch mode, the three analytical packages are:
  - Savings and Loan Financial Planning Program (SLP): projects a clients future financial position by combining a current balance sheet with certain economic projections. SLP helps a savings and loan predict:
    - Profitability of loans and securities.
    - Tax impact of new financial plans.
    - Overall results of changed regulatory or economic factors.
    - Operating expense variation.
    - Optimum debt and equity mix.
    - Minimum cost-profit ratios.
    - RCC presently has 100 clients using this service. Average client expenditures are approximately \$8,000 per year.
  - Mutual Savings Banks Financial Planning Program (MSB): shows the implications of potential strategies concerning funds excesses or deficits for mutual savings banks. Combining a current balance sheet with a potential strategy, MSB will project future:



## REMOTE COMPUTING CORPORATION

- . Balance sheets.
- . Income statements.
- . Cash flow.
- . Tax details and summary.
- . Loan schedules.
- . Deposit levels and their implications.
- . Liquidity analysis.
- . RCC presently has five clients using this service. Average client expenditures are approximately \$1,700 per year.
- Liquidity Management System (LMS): a portfolio accounting and management system providing automatic securities market valuation. LMS provides accounting reports for:
  - . Accrued interest.
  - . Premium amortization.
  - . Discount accretion.
  - . Principle receivable balances.
  - . Cash flow analysis.
  - . Regulatory liquidity.
  - . RCC presently has 40 clients using this service.
- RCC has two data base services available to the financial industry:
  - AMMINET (Automated Mortgage Market Information): a national price quotation and news network, communicating the mortgage market and offered on a real-time basis. Participants from a secondary mortgage market industry group register their offers to buy and sell mortgage investments in a central data base. Buyers and sellers access this via remote terminals, request listings which meet their specifications, and communicate purchase offers. RCC presently has 110 customers on this service. Average customer expenditures are \$2,500 per year.
  - The Merlin System: combines securities, commodities, and money market data bases. Contains all New York and American Stock Exchange stocks and bonds giving volume, tick data, and transaction history for the past six months. Programs are available to display prices, volume, moving averages, portfolio evaluation, etc. RCC presently has 60 clients on this service. Average customer expenditures are \$16,000 per year.
- RCC has a general program library which can be used with or independently of the other services. These include loan control, loan sale analysis, mortgage amortization schedules, compound interest factor table generator, certificate of deposit pricing, etc. RCC presently has 85 customers using these services.

## REMOTE COMPUTING CORPORATION

- Data is transmitted on leased, WATS, and Tymnet lines. Over 100 cities are presently served.

## COMPANY BACKGROUND

- Remote Computing Corporation was founded in 1966 in California to provide utility on-line services. RCC now offers systems for planning, analysis, data base information, and management reporting. They have concentrated on serving savings and loan associations, mutual savings banks, the secondary mortgage market, and the securities and mortgage markets.

## IMPACT ON CITITRAN

- RCC has evolved into a data base oriented remote computing service firm from a general purpose time sharing organization. The company has been in and out of financial difficulty for several years and now seems to be solidifying as its newer applications specialties have begun to take hold. The company represents no threat to CITITRAN, but does compete with Citibank's Interactive Computer Center.

SEI CORPORATION  
680 E. Swedesford Road  
Wayne, PA 19087  
(215) 687-1700

President: Edward Gonzalez  
Ownership: Private  
Revenues: \$18.5 million (1978)  
Employees: 240

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## PROFILE

- Banking Industry Revenues

- \$18.5 million (100% of total revenues).

- Type Of Banking Services

- Processing services 100%
- Remote computing
- Interactive
- \_\_\_\_\_
- 100%

- Banking Industry Specialization

- Trust departments and commercial banks.
- Trust and title companies.

- Major Clients

- 250 banks including Wells Fargo.

- Major Competitors

- Bradford National Corporation.
- Comshare.
- Shear Development Corporation.
- Key Financial Systems.

- Sales Offices

- Headquarters location.

- Employees

- All personnel are working in supporting the trust information system.
  - Marketing 10
  - Customer support 30
  - Development 50
  - Production 90
  - Administrative 60
  - \_\_\_\_\_
  - Total personnel 240

## SEI CORPORATION

- Geographic Concentration

- Widely dispersed throughout the U.S.

- Data Center Locations

- Headquarters location.

- Computer Hardware

- Twenty-four Prime 400 minicomputers operating in a switched I/O network with 40mb of disk.

## BANKING PRODUCTS AND SERVICES

- SEI offers the most complete on-line personal trust information system on an RCS basis. Called TRUSTAID, the service is offered as a total system; that is (1) software; (2) terminal hardware; (3) communication lines; (4) support; and (5) maintenance.
- The system is on-line for data entry and inquiry, and updates the master file in real-time.
- The trust information system does trust accounting, automated security movement and control, automated cash management, ERISA reporting, and automated tax return preparation.

## COMPANY BACKGROUND

- SEI Corporation was formed by Messrs Katz and West as a privately held company in 1971. The company was originally involved in using simulation for executive gaming (planning).
- SEI developed TRUST-AID I for small bank trust departments and expanded the system to TRUST-AID II for medium to large trust departments.
- SEI has been growing at the rate of over 20% per year. In 1971 they began serving six bank trust departments. In 1978 they were servicing 250 bank trust departments, with over 200,000 trust accounts or approximately 14% of the available market.

## SEI CORPORATION

### IMPACT ON CITITRAN

- SEI Corporation would be a viable acquisition candidate for the trust services market. SEI Corporation is not a competitor of CITITRAN. Offering trust services on an RCS basis enhances the potential that a bank would consider a computer services vendor for retail operations.



**SHARE COMPUTER SYSTEM, INC.**  
8009 N.W. 36th Street  
Miami, FL 33166  
(305) 592-6224

V.P. Manager: Colin Armstrong  
Ownership: Subsidiary of 3 PM, Inc.  
Revenues: \$1.2 million Fiscal Year  
End 3/78  
Employees: 50

---

## PROFILE

- Banking Industry Revenues

- \$300,000 (expected revenues by end of 1979).

- Type Of Banking Services

- Processing services 100%

- Banking Industry Specialization

- Mortgage banks.

- Major Clients

- The company anticipates six clients within one year.
- It is targeting small to medium sized mortgage banks (\$10 million to \$30 million in assets).

- Major Competitors

- Computer Power, Jacksonville, FL.
- Large mortgage banks.

- Sales Offices

- Miami, FL.
- Share Computer System integrates its sales function with that of its parent company.

- Employees

- Marketing sales	1
- Software	2
- Computer operations	7
Keypunch	7
Operation control	4
Programmers	4
- Administrative	15
	<hr/>
Total employees	50

## SHARE COMPUTER SYSTEM, INC.

- Geographic Concentration

- Florida and Alabama.

- Data Center Locations

- Miami, FL.

- Computer Hardware

- One each of the following: IBM System/360 Model 30; System/360 Model 40 and System/360 Model 50 (DOS/MVT), and a Texas Instrument 990.

## BANKING PRODUCTS AND SERVICES

- The company plans to begin marketing its on-line mortgage banking system within 90 days of this report and expects 1979 revenues from this activity to reach \$300,000.
  - The system will include the following applications: mortgage operations, loans processing, and a warehouse service.
  - Clients will use dial up, dedicated lines which will serve six cities in Florida, with the majority of clients in Miami, Ft. Lauderdale, and Tampa. The company will use its own teleprocessing software.
  - All software was developed by Share Computer System, Inc.
- The company is considering expansion of services to credit unions in the future, however, there are no firm plans to do so.

## COMPANY BACKGROUND

- In 1969, the company was incorporated as a spin-off of Date Federal Savings. It became a corporate entity in 1973 and was acquired in September 1977 by 3 PM, Inc.
- The company currently derives its revenues from the medical and pharmaceutical sectors. It is offering a new medical product, MDS, which provides doctors with an on-line system covering appointment control and billing.



## SHARE COMPUTER SYSTEM, INC.

- The company has installed one Texas Instrument 990 which is used for medical applications and anticipates additional sales of similar systems this year.
- The company operates its own database system to service the pharmaceutical industry.
- Share Computer System, Inc. plans to eventually adopt the name of its parent and is actively looking for acquisitions.

## IMPACT ON CITITRAN

- Share Computer offers only mortgage loan processing. It is not a competitor to CITITRAN.



**I.P. SHARP ASSOCIATES**  
145 King Street West  
Toronto, Ontario M5H1J8  
(416) 364-5361

President: Ian Sharp  
Ownership: Private  
Revenues: \$13 million (1978) (INPUT  
estimate)  
Employees: 300

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## PROFILE

- Banking Industry Revenues

- \$3.5 million (25% of total revenues).

- Type Of Banking Services

- Processing services 100%
- Interactive Database
- \_\_\_\_\_
- 100%

- Banking Industry Specialization

- Commercial banks.

- Major Clients

- Company refused to provide.

- Major Competitors

- Boeing Computer Services Company.
- Comshare, Inc.
- Data Line Service Company.
- Scientific Time Sharing Corporation.

- Sales Offices

- Atlanta, Birmingham, Boston, Chicago, Cleveland, Dallas, Houston, Miami, Minneapolis, New York, Newport Beach, Palo Alto, Philadelphia, Reseda, Rochester, San Francisco, Seattle, Washington.
- Amsterdam, Brussels, Calgary, Copenhagen, Dusseldorf, Edmonton, Gloucester, London, Melbourne, Montreal, Ottawa, Stockholm, Sydney, Toronto, Vancouver, Victoria, Vienna, Warrington, Winnipeg, Zurich.

## I. P. SHARP ASSOCIATES

- Employees

-	Marketing	50
-	Customer support	25
-	Computer operations	150
-	Administrative	<u>75</u>
	Total personnel	300

- Geographic Concentration

- None. Products and services are marketed throughout Canada, the U.S., Europe, and Australia.

- Data Center Locations

- Headquarters location.

- Computer Hardware

- Two Amdahl System/470s V/6ii.
- DOS operating system.

## BANKING PRODUCTS AND SERVICES

- I.P. Sharp Associates (IPS) offers banking clients several data base services. These include:

- Bank of Canada Financial Statistics Data Base: contains weekly financial statistics as released by the Bank of Canada. The data base consists of 136 items. Included are the Bank of Canada assets and liabilities, Government of Canada balances and securities outstanding, money supply, money market rates, chartered bank data, and government bond yields.
- CNASIM Data Base: contains over 50,000 time series of Canadian socio-economic data, consisting of national accounts, price indices, labor, agriculture, manufacturing, finance, construction, health and welfare, census services and external trade for the past 30 years. This data is collected and maintained by Statistics Canada.
- Consumer Price Indices: The U.S. Consumer and Wholesale Price Index data bases as supplied monthly to I.P. Sharp Associates from the Bureau of Labor Statistics of the U.S. Department of Labor. All time series in these data bases contain monthly data, some dating back to 1914.

## I. P. SHARP ASSOCIATES

- Central Statistics Office (CSO) Data Base: contains 2,000 series covering a wide area of finance and economics relating to the United Kingdom. It is published by the U.K. Central Statistics Office which collects and consolidates data obtained from various parts of the civil service. Main areas covered are industrial production, national income and expenditure, balance of payments, price, wages and earnings, and population and manpower.
  - Currency Exchange Data Base: contains exchange rates for a minimum of 24 currencies reported daily in four markets - New York, Toronto, London and Zurich. New York data extends back to 1972; Toronto and London data begins in 1977; Zurich data begins in 1978.
  - International Monetary Fund Data Base: contains over 25,000 time series on international financial statistics gathered from approximately 215 countries. Included are exchange rates, international liquidity, banking, interest rates, prices and production, commodities, national accounts, government spending, etc. The data is available monthly, quarterly, and annually and dates back 10 to 20 years.
  - National Bureau of Economic Research (NBER) Data Base: contains over 3,000 monthly, quarterly and yearly time series relating to the U.S. economy. Time series available include financial series, industrial series, population, labor force, employment, earnings, national income and product accounts, and forecasts. The on-line information dating back to 1950 is updated monthly.
- IPS offers a set of investment assistance packages on its processing network. They include:
    - Portfolio Management Information System (PMIS): a recordkeeping system for managing and analyzing investment portfolios. Reports available from PMIS cover valuations, transactions (both individual and groups of funds), cash flows, profit and loss, security cross references, maturity schedules, and margin reports. The internal design of the system also permits the user to incorporate custom analytical techniques. Access is available to public data bases containing daily information on the Canadian, New York, and American stock exchanges. Several other data bases can be accessed to obtain data of other economic factors.
    - Risk Analysis: designed to help the user quantify the risk element in investment ventures. RISK performs the many calculations that need to be executed when using risk theory in the analysis of projects. Given the description of a project, RISK performs evaluations based on a risk-adjusted value. The functions have English-like syntactic rules and can operate in either interactive or non-interactive mode.

## I. P. SHARP ASSOCIATES

- Stock Exchange Data Base: contains the daily stock exchange data from all the Canadian, New York and American exchanges for the past 260 trading days. Included are the New York Composite Indices, and the 62 Indices that make up the Toronto Stock Exchange 300.
- Canadian Stock Option Data Base: consists of daily trading data for call options traded on the Toronto, Montreal and Trans Canada exchanges. Data available include high, low, close, volume, open interest, bid, ask and dollar value traded. Historical data is available for the past 260 trading days.
- IPS also has two financial analysis packages used by banking clients:
  - Financial Analysis Library: contains over 40 financial functions to assist in the solution of problems in financial analysis planning, project analysis, loan management, capital budgeting, depreciation, interest rates and present and future values.
  - APL Integrated Decision System (AIDS): facilitates the orderly development of a planning and control system allowing one to specify in a detailed manner, any relationship between planning variables. Standard forecasting, depreciation, and financial mathematics are available. AIDS can produce planning data bases, case studies, models, report programs, planning variables or planning time frames.
- The 15 banking clients on IPS APL timesharing service transmit data on a packet-switched dial-up network tying the Toronto data center and 200 cities throughout North America, Europe, and Australia.

## COMPANY BACKGROUND

- I.P. Sharp Associates was incorporated in Toronto in 1964 as one of the first APL time sharing companies. Their interactive services now cover the U.S., Canada, Europe, and Australia. Industries served include manufacturing, transportation, utilities, banking, education, distribution, and the government.

## IMPACT ON CITITRAN

- I. P. Sharp offers remote access to economic and financial data bases. It is not competitive to CITITRAN nor will it be. It could be an interesting acquisition for Citibank's ICC.

**SHEAR DEVELOPMENT CORPORATION**  
75 Federal Street, Suite 614  
Boston, MA 02110  
(617) 426-3404

President: Robert Shear  
Ownership: Private  
Revenues: \$4.5 million (1978)  
Employees: 60

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## PROFILE

- Banking Industry Revenues
  - \$4.5 million (100% of total revenues).
- Type Of Banking Services
  - Turnkey systems 100%
- Banking Industry Specialization
  - Trust departments of commercial banks.
- Major Clients
  - Bank of California.
  - Chase Manhattan.
- Major Competitors
  - SEI, Inc.
  - Comshare.
  - Key Financial Systems.
  - National Computer Systems.
- Sales Offices
  - Headquarters location.
- Employees
  - All personnel are involved in supporting turnkey systems.

• Marketing	6
• Customer support	20
• Development	20
• Administrative	<u>14</u>
	60
- Geographic Concentration
  - Twenty banks in the Northeast.

## SHEAR DEVELOPMENT CORPORATION

- Data Center Locations

- None.

- Computer Hardware

- DEC PDP-11 Series.

## BANKING PRODUCTS AND SERVICES

- Shear has developed an on-line personal trust system using DEC PDP-11 Series minicomputer and peripherals. The personal trust system is installed in the trust departments, and is the sole application on the system. The system is completely on-line and files are updated in real-time.
- Shear leases the software and supplies the DEC equipment on an OEM basis. The system was developed using a data base management system (DBMS).
- The system provides automatic securities pricing via a dial-up communication network.
- Price of the system is \$150,000 for hardware and \$150,000 for software.

## COMPANY BACKGROUND

- Shear Development was formed as a privately owned company in 1974, with the objective of providing a personal trust information system via a mini-computer located in the trust department.
- First installations in 1975 were in small New England banks. Shear now has over 20 systems installed. The data base management system allows the system to successfully operate in large trust departments. Shear is currently installing two systems in the Bank of California and has a contract to install two systems in Chase Manhattan Bank.
- Shear concentrates their marketing efforts towards banks with \$200 million in trust assets.



## SHEAR DEVELOPMENT CORPORATION

### IMPACT ON CITITRAN

- Shear Development is not a competitor to CITITRAN. Offering a turnkey mini system to the trust side of a bank enhances the potential that minis could be installed to handle the retail side.



**A. O. SMITH DATA SYSTEMS DIVISION**  
8651 N. Port Washington Road  
Milwaukee, WI 53217  
(414) 447-4472

CEO: Allen Brown  
Ownership: Division of A. O. Smith  
Corporation  
Revenues: \$11 million (1978)  
Employees: 250

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## PROFILE

- Banking Industry Revenues
  - \$550,000 (5% of total revenues).
  
- Type Of Banking Services

- Processing services	85%
- Interactive (100%)	
- Software products	<u>15%</u>
	100%
  
- Banking Industry Specialization
  - Commercial banks, savings and loan, and credit unions.
  
- Major Clients
  - Commercial and Savings Bank of Monroe.
  - First Bank-Midland.
  - First Federal Savings and Loan of Wisconsin.
  - First Wisconsin National Bank.
  - Marine National Exchange Bank.
  - Marshall and Ilsley Bank.
  - Midland National Bank.
  - Peoples Marine Bank of Green Bay.
  
- Major Competitors
  - Boeing Computer Services.
  - Kranzley and Company.
  
- Sales Offices
  - Headquarters location.

## A. O. SMITH DATA SYSTEMS DIVISION

- Employees

- Marketing	20
- Software services	150
- Customer support	15
- Computer operations	25
- Administrative	<u>40</u>
Total personnel	250

- Geographic Concentration

- Wisconsin.

- Data Center Locations

- Green Bay, WI.
- Madison, WI.
- Milwaukee, WI (four).
- Monroe, WI.

- Computer Hardware

- Hardware used to provide the switching services to banks:
  - One Amdahl 470/V6.
  - One IBM 370/165-II.
  - MVS operating system.

## BANKING PRODUCTS AND SERVICES

- A. O. Smith Data Systems (SDS) provides an electronic funds transfer (EFT) switching facility for Tyme Corporation, a cooperative of Wisconsin financial institutions. The software for this system was developed cooperatively by A. O. Smith, Tyme Corporation and IBM in 1976.
- The TYME (Take Your Money Everywhere) IS MONEY system handles EFT, electronic point of sale (POS), automated teller machines (ATM), and automated clearing house (ACH) transactions. Deposits, withdrawals, transfers, cash advances, charge card payments, and check authorizations are all supported.
- SDS provides switching services to seven bank data centers located throughout Wisconsin. The 225 banks, credit unions, and savings and loans which now use the EFT system are tied via leased lines to these centers.

## A. O. SMITH DATA SYSTEMS DIVISION

- SDS has the rights from Tyme to market the software to large institutions or associations of institutions needing EFT capabilities. The two available packages are:
  - TYME IS MONEY: a software package that adds switching capability to an existing computer system. The package runs on an IBM 370/148 or larger, IBM 4341, or on any equivalent plug-compatible machine which can use TCAM communications control software. It licenses for \$220,000 including one years maintenance.
  - TYME ON-LINE: an on-line card based management system. The package allows application transactions to be on-line with the EFT switch, rather than to an intermediary data center. It licenses at \$60,000 fully supported, with a years maintenance included.
- To date, SDS has licensed one TYME IS MONEY package, which will be installed at the Valley National Bank of Phoenix in 1979. Negotiations are in progress with the Michigan ACH Association concerning both the package and a facilities management contract. SDS stated they hoped to license six of the complimentary TYME ON-LINE packages to users of the newly installed TYME IS MONEY systems.

## COMPANY BACKGROUND

- A. O. Smith Corporation, an \$806 million manufacturing company, formed A. O. Smith Data Systems Division in 1961. Primarily a processing and software vendor to manufacturers, they contracted to operate the Tyme EFT switch in 1978. Also that year, SDS gained the rights to market the EFT system software.
- Services to the parent A. O. Smith Corporation represent 40% of SDS revenues. Banking revenues currently account for 5%, with the remaining 55% originating with a variety of other industries.
- SDS does not presently plan any new offerings to the financial industry, although enhancements of existing products are planned for 1979.

## IMPACT ON CITITRAN

- Smith Data Systems (SDS) is not a competitor to CITITRAN. Infact, the switching and EFT networks would enhance CITITRAN's marketability. In that SDS markets services primarily to the manufacturing sector, they may be interested in selling off their interest in banking networks.



**SOFTWARE ag OF NORTH AMERICA,  
INC.**

1180 Sunrise Valley Drive  
Reston, VA 22091  
(703) 860-5050

President, John N. Maguire  
Ownership: Private  
Revenues: \$6,000,000 est. FYE 12/78  
Total Employees: 68

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**PROFILE**

● Banking Industry Revenues

- \$1,020,000 (17% of total revenues).

● Services Provided

- Software Products 95%
- Professional Services 5%
- 100%

● Banking Industry Specialization

- None. All products are system software packages and can be used by any industry sector. Software ag stated they did not have or plan to have any modules specifically designed for banking.

● Major Clients

- City National Bank.
- Chase Manhattan.
- First Bank of Israel.
- Citibank.

**PRODUCTS/SERVICES**

● ADABAS (the Adaptable Data Base System)

- Data Base Management System (DBMS), developed in 1970.
- Price: \$132,000 for OS  
\$ 88,000 for DOS
- 365 installations worldwide.
- Used on IBM Systems/360 and /370 and on DEC PDP-11. There are 4 DEC PDP-11 installations, non of which are banks.

- Com-plete

- Program development and teleprocessing and monitoring system, introduced in 1977.
- Price: \$90,000.
- 78 Installations.

- NATURAL

- High level programming language for ADABAS installations.
- Introduced May 1978.
- Price: \$24,000.
- 80 installations.

- ADABOMP

- Applications software package for the manufacturing industry.
- Introduced in 1977.
- Price: \$12,000.
- 16 installations.

## GEOGRAPHIC MARKETS

- The Northeastern states are the largest source of Software ag revenues; the Pacific coast is second, and the Midwest is third. Other revenues sources are the Southeast, Mountain, and North Central states.

## IMPACT ON CITITRAN

- Software ag derives nearly all of their revenues from the sale of ADABAS, one of the leading commercial general purpose DBMS software packages. Software ag itself does not compete directly with CITITRAN. However, banking customers who have implemented their key applications using ADABAS, will find it difficult to change to a new system.



SUN INFORMATION SERVICES OF  
KENTUCKY  
6600 Grade Lane  
Louisville, KY 40221  
(502) 361-7161

President: Larry Riddle  
Ownership: Subsidiary of Sun  
Corporation  
Revenues: \$5.2 million (1978)  
Employees: 148

---

## PROFILE

- Banking Industry Revenues

- \$3.2 million (60% of total revenues).

- Type Of Banking Services

- Processing services 100%
- Remote computing (50%)
- Interactive
- Remote batch
- Batch services (50%)
- \_\_\_\_\_
- 100%

- Banking Industry Specialization

- Commercial banks.

- Major Clients

- Citizens Bank and Trust Company.
- Clark County Bank.
- First Security National Bank of Lexington.
- Floyd County Bank.
- Second National Bank of Hamilton.

- Major Competitors

- Automatic Data Processing, Inc.
- General Electric Information Services Division.
- McAuto.
- Rapidata, Inc.

- Sales offices

- Cincinnati, Dayton, Indianapolis, Lexington, and Louisville.

## SUN INFORMATION SERVICES OF KENTUCKY

- Employees

- Marketing	6
- Computer operations and customer support	122
- Administrative	<u>20</u>
Total personnel	148

- Geographic Concentration

- Illinois, Indiana, Ohio, and Kentucky.

- Data Center Locations

- Headquarters location.
- Lexington, Kentucky.

- Computer Hardware

- Four Honeywell B4300 mainframes.
- One IBM System/370 OS.
- One IBM System/370 Model 65 OS.
- One Datanet 30 teleprocessing unit.

## BANKING PRODUCTS AND SERVICES

- Sun Information Services of Kentucky (SIS) offers 8 applications to the banking industry. These are:
  - Certificate of deposit.
  - Combined statement accounting.
  - Demand deposit accounting.
  - General ledger.
  - Installment loan accounting.
  - Mortgage loan accounting.
  - Savings accounting.
  - Trust system.
- Services are available in interactive, remote batch, or batch modes. SIS presently processes 6 multibranch client banks and performs facilities management at one additional site.

## SUN INFORMATION SERVICES OF KENTUCKY

- SIS offers an on-line Central Information File (CIF) for DDA, loan, and savings applications. When the installed hardware is upgraded this year, more applications will be available through the CIF service.
- Data is transmitted to the Lexington and Louisville data centers via a leased line network using CICS teleprocessing software. SIS also operates a large remote job entry station in Indianapolis.
- Monthly fees vary widely by mode of processing, units, time used, and number of branches.
- All software used by SIS was purchased from outside sources, including Florida Software, University Computing Company, and St. John's Bank of Indianapolis.
- SIS aims their marketing efforts towards small to medium sized banks. SIS plans a major upgrade of their center hardware in the near future. This upgrade will add additional capacity and potentially attract larger institutions to their service offerings.

## COMPANY BACKGROUND

- Sun Information Services of Kentucky was originally incorporated as Metridata Computing, Inc. (MCI) in 1968 to provide general processing services within the Illinois area. Shortly afterward, MCI began offering specialized banking applications. On January 31, 1979, Metridata was acquired by Sun Information Services, a subsidiary of Sun Corporation.
- SIS serves the distribution industry and government with an assortment of general business and utility offerings. As an example, Jefferson County of Kentucky uses the SIS TASKMASTER System to perform auto registration processing.

## IMPACT ON CITITRAN

- SIS of Kentucky is the former Metridata, Inc. a recent acquisition of the Sun Oil Company which has been integrated into its Sun Information Services operation. SIS is likely to become very aggressive in the finance and banking markets and should be looked upon as a potentially strong competitor to CITITRAN.



SYSTEMATICS, INC.  
212 Center Street  
Little Rock, Arkansas 72201  
(501) 372-6141

President: Walter Smiley  
Ownership: Private  
Revenues: \$22 million (1978)  
Employees: 400

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## PROFILE

- Banking Industry Revenues

- \$22 million (100% of total revenues).

- Type Of Banking Services

- Processing services 100%
- Batch services (75%)
- Facilities management (25%)
- \_\_\_\_\_
- 100%

- Banking Industry Specialization

- Commercial banks.

- Major Clients

- California Canadian Bank.
- Hibernia Bank.
- Independent Bancshares.
- Manufacturers Bank.

- Major Competitors

- Electronic Data Systems.
- National Sharedata Corporation.

- Sales Offices

- Headquarters location.

- Employees

- Marketing 5
- Customer support and  
computer operations 375
- Administrative 20
- Total personnel 400

## SYSTEMATICS, INC.

- Geographic Concentration

- None. Products and services are marketed throughout the U.S.

- Data Center Locations

- Thirty spread throughout the U.S.

- Computer Hardware

- Thirty IBM 360/370 systems operating under DOS or DOS/VS.

## BANKING PRODUCTS AND SERVICES

- Systematics has developed a large on-line software package called Financial Management System. It is designed to handle all processing and information requirements of large financial institutions. It includes:

- Integrated Monetary Processing and Control System (IMPACS), a multi-branch, multibank demand deposit account package providing:
  - Automated clearing house capability.
  - Float and uncollected funds capture.
  - Descriptive transactions.
  - Multistatement report formatting.
  - Descriptive, combined, and serialized statements.
  - Automatic fund transfer among applications.
  - Automatic transfer among demand accounts.
  - Interest on demand deposit accounts.
  - Overdraft report capability.
- Savings.
- Certificate of Deposit.
- Time Deposit Open Accounting (TDOA).
- Investments: a bond portfolio package including pricing analysis, futures maturity, interest accrual, amortization of premium, and accretion of discount for:
  - Municipal general obligation and revenue bonds.
  - Federal agency bonds.
  - Treasury bills.
  - Corporate bonds.
  - Industrial revenue bonds.
- Personal Trust.
- Mortgage Loans.
- Commercial Loan.

## SYSTEMATICS, INC.

- Installment Loans with yield analysis.
  - Combined Statements: combines bank literature with account statements.
  - Credit Card Accounting.
  - Payroll.
  - Financial Management System (FMS): a general ledger package with budget information, historical analysis, and cost allocation analysis to aid management decisions.
  - Item Processing System: captures, balances, and controls all transactions from all locations within a bank.
  - Information Access System (IAS): stores, organizes, indexes, and correlates personal and financial information about a bank's clients.
- The Financial Management System can be used either on-line or off-line and has the capability to use touchtone phones, automated teller machines, and video terminals. The Inter-System Item Transfer (ISIT) feature automatically adds all new statistical information from any application to the general ledger system for more accurate posting.
  - Systematics offers this system only in conjunction with their facilities management program. Systematics currently has 30 such arrangements spread throughout the U.S.
  - Systematics retains the privilege of servicing other banks on their facilities management clients' equipment. At present 120 banks have contracted with Systematics for this processing arrangement. This service costs an average client \$12,500 per month.

## COMPANY BACKGROUND

- Systematics, Inc. was formed in 1968 in Arkansas to provide facilities management to local banks. To make more efficient use of their clients computer facilities, Systematics soon began offering processing services to other institutions on the equipment they managed. Systematics now has 150 client banks spread throughout the U.S.
- Stephens, Inc., a large local investment firm, holds a 75% interest in Systematics.

## IMPACT ON CITITRAN

- Systematics is well liked by its user commercial banks. As such Systematics directly competes with CITITRAN. Systematics would make a good acquisition candidate to compliment marketing, servicing and maintaining the CITITRAN system.





SYSTEMS CONSULTANTS, INC.  
1054 31st Street NW  
Washington, DC 20007  
(202) 342-4000

President: Jose J. Yglesias  
Ownership: Private  
Revenues: \$40 million (1978)  
Employees: 1,200

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## PROFILE

- Banking Industry Revenues

- \$200,000 (5% of total revenues).

- Type Of Banking Services

- Professional services 100%
  - Custom programming
  - Turnkey systems
- 
- 100%

- Banking Industry Specialization

- Commercial banks.

- Major Clients

- Chase Manhattan Bank.
- Citicorp.
- Mellon Bank.
- Nationwide Financial Services.
- United California Bank.

- Major Competitors

- Company would not specify.

- Sales Offices

- Arlington, VA; Baton Rouge, LA; Colorado Springs, CO; Dayton, OH; Emeryville, CA; Eureka, CA; Honolulu, HI; Middletown, RI; Mt. Laurel, NJ; Oxnard, CA; Poulsbo, WA; Ridgecrest, CA; St. Petersburg, FL; San Diego, CA; Springfield, VA; Sunnyvale, CA; Vallejo, CA; Virginia Beach, VA; Washington, DC.

- Employees

- Marketing 10
  - Custom system design 1,090
  - Administrative 100
- 
- Total personnel 1,200

## SYSTEMS CONSULTANTS, INC.

- Geographic Concentration
  - The District of Columbia, California, and New England.
- Data Center Locations
  - None. Computers for development are located in California, Maryland, New York, and Washington, DC.

## PRODUCTS AND SERVICES

- Systems Consultants, Inc. (SCI) provides professional services to all industry sectors, especially banking, government, utilities, and manufacturing. Specific offerings include minicomputer systems, systems design, software design, management systems, modeling and simulation, word processing, photo typesetting, technical writing, etc.
- Turnkey system design and implementation represent the bulk (80%) of banking industry revenues. SCI offers custom systems only. Seven banks now use SCI services; one has purchased an on-line billing turnkey system, another an automated credit rating system. Other services offered to banking clients include custom application programming and management consulting.

## COMPANY BACKGROUND

- Systems Consultants, Inc. was established in 1976 to provide a full range of professional services, particularly to the U.S. government. There are presently four operating groups:
  - Systems Engineering Group: design, integration, and installation of large computer systems, including planning, testing, and support.
  - Management Systems Group: provides information training, planning, and analysis for management decision making.
  - Computer Sciences and Technology Group: small system design, implementation, and support.
  - Publication Services Group: complete word processing, photo typesetting, printing, binding, technical writing, and technical instruction.
- SCI's single largest customer is the Department of Defense. SCI develops systems of all types, including aircraft, antisubmarine, ballistic test, command and control, guided missile, intelligence, radar, surveillance, and weapons. Revenues from these sources approached \$32 million in 1978.

SYSTEMS CONSULTANTS, INC.

### IMPACT ON CITITRAN

- Systems Consulting is a well-known contract programming services firm (body shop). All of their work is development, rather than offering a standard product. They are not a threat to CITITRAN. However, they should be regarded as a resource if systems assistance for CITITRAN development is needed.



TMI SYSTEMS CORPORATION  
One Broadway  
Cambridge, MA 02140  
(617) 492-6520

President: Wade Tambor  
Ownership: Private  
Revenues: \$6 million (INPUT  
estimate) 1978  
Employees: 140

---

## PROFILE

- Banking Industry Revenues
  - \$5.1 million (85% of total revenues).
- Type Of Banking Services

- Software products	20%
- Professional services	20
- Turnkey systems	<u>60</u>
	100%
- Banking Industry Specialization
  - Commercial banks, credit unions, and savings and loan institutions.
- Major Clients
  - Bank of New York.
  - Chase Manhattan Bank.
  - Citibank.
  - First National Bank of Boston.
  - Manufacturers Hanover Trust.
  - Marine Midland Bank.
  - Mellon Bank.
  - Wells Fargo Bank.
- Major Competitors
  - Company was not aware of any.
- Sales Offices
  - Boston, Dallas, New York, San Francisco, and Washington, DC.

## TMI SYSTEMS CORPORATION

- Employees

-	Marketing	4
-	Software services	100
-	Customer support	16
-	Administrative	<u>20</u>
	Total personnel	140

- Geographic Concentration

- East and West coast financial centers.

## BANKING PRODUCTS AND SERVICES

- TMI Systems Corporation offers nine software packages in the money management and bank operations areas. These are:

- **FUNDTRAC:** provides fixed income and equity securities processing, on-line transaction processing, management and accounting reports, and pricing notices for investment portfolios.
- **BAS, Bond Analysis System:** provides historical data analysis, yield and spread monitoring, yield curve analysis, swap analysis, and performance measurement of various types of bonds.
- **FEDCLEAR:** provides a clearance system designed to reduce cost and increase control over Federal Reserve book entry clearances.
- **FTX, Fund Transfer System:** provides automatic access to FEDWIRE, BANKWIRE, CHIPS, SWIFT, TWX, and other fund transfer networks.
- **FS, Foreign Exchange:** provides transaction monitoring, ticket preparation, and current currency positions for foreign exchange trading operations.
- **WORKSIM, Work Simulation:** provides a simulation model for check processing operations analysis.
- **CUSIM, Customer Simulation:** provides a simulation model to determine the optimum number of teller stations and optimum staffing levels for any given location.
- **Bankswitch-II:** an EFT system for large banking institutions.
- **Letter of Credit.**

- Packages will operate on IBM System/360 and 370, DEC PDP-10 Series, or DEC PDP-20 Series, equipment. Most packages are also adaptable to large Honeywell and Burroughs machines.

## TMI SYSTEMS CORPORATION

- TMI has sold 100 packages to date; their clients are among the top 300 banks in the country.
- TMI customizes their software packages and combines them with DEC PDP-10 or PDP-20 Series minicomputers as turnkey systems. Price varies widely by application.
- TMI began offering turnkey systems in 1971, 35 systems have been sold to date. Turnkey systems are available for the banking, manufacturing, retail, wholesale, and insurance industries. Sixty percent of total revenues originate with turnkey contracts.

## COMPANY BACKGROUND

- TMI Systems Corporation was formed in 1969 as Technology Management Incorporated to provide consulting and systems development in the North-eastern United States. The company changed its name to TMI in 1976.
- TMI now markets their software packages and turnkey systems throughout the United States. Marketing efforts are concentrated in the top 200 to 300 banks.
- TMI has a contract under which Applied Logic of Boston, a processing services vendor, offers TMI software on their network.

## IMPACT ON CITITRAN

- TMI is a software house specializing in the banking and finance area. It is not directly competitive with CITITRAN except in that it sells software to CITITRAN competitors.





TELESTAT SYSTEMS, INC.  
150 East 58th Street  
New York, NY 10022  
(212) 826-0640

President: George Jochum  
Ownership: Subsidiary of Western  
Union Teleprocessing Group  
Revenues: \$11 million (estimate)  
Fiscal Year End 12/78

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## PROFILE

- Banking Industry Revenues
  - \$9.68 million (88% of total revenues).
  
- Type Of Banking Services

- Processing services	25%
- Software products	50
- Professional services	<u>25</u>
	100%
  
- Banking Industry Specialization
  - Commercial banks.
  - Trust banks.
  
- Major Clients
  - First National Bank of Chicago.
  - Wells Fargo Bank.
  - Chemical Bank.
  - Merrill Lynch.
  - Bache & Company.
  
- Major Competitors
  - Company would not provide.
  
- Sales Offices
  - New York.
  
- Employees
  - Company would not provide.

## TELESTAT SYSTEMS, INC.

- Geographic Concentration
  - Clients are distributed equally across the country in major metropolitan areas.
- Data Center Locations
  - New York.
- Computer Hardware
  - One Xerox Sigma 9, one Sigma 6 with an EOI operating system.

## BANKING PRODUCTS AND SERVICES

- In 1978 Telestat Systems, Inc. derived an estimated 88% of its total revenues from the banking and financial sector. The company markets a software product, provides professional services, and offers processing services to clients.
- TPMS: Telestat Performance Measurement System was introduced in 1974. It is a modularized system incorporating an interface module, selection, comparative data base and performance report modules. It provides current and comparative statistics, analysis of annual returns, detail statistics, appreciation on a calendar basis, principle and income time weighted rates on personal trust, and management information.
- Telestat provides financial managers with its Teleprice/80 which was introduced originally in 1969 as Telprice/70. It is designed to facilitate the evaluation of portfolios. The information included covers dividends, annual rates, recent distributions, bond data, and current yield. The Telprice master list includes debt and equity issues on the American and New York Stock Exchanges, U.S. government securities, Agency bonds, and over 7,000 widely held unlisted corporate and municipal bonds, and preferred and common stock.
- Telac/1 and 2 is an on-line pricing data base service which is updated and made available to users every evening. It provides the same type of information as Telprice/80. It supplies clients with a time shared data base which is accessed through FORTRAN.
- Professional services are provided on a customized basis to support the company's business of selling computerized financial data.

## TELESTAT SYSTEMS, INC.

### COMPANY BACKGROUND

- Telestat Systems was formed in 1969 and was acquired by Western Union Teleprocessing Group in 1976.
- A small percent, 7% of the company's revenues is derived from manufacturing and government clients.
- The company believes that it holds a strong position in the financial market by having more than 700 major trust departments on its client list. All applications offered are financial.

### IMPACT ON CITITRAN

- Telestat basically provides data bases and services relating to the trust/investment side of the banking sector. As such it is not competitive to CITITRAN.



TOTAL SYSTEMS, INC.  
330 Main Street  
Houston, TX 77002  
(713) 526-8911

President: Anthony Masraft  
Ownership: Subsidiary of SoWestern  
Group Financial  
Revenues: \$3,000,00 - \$5,000,000  
FYE 12/31/78  
Employees: 78

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## PROFILE

- Banking Industry Revenues
  - \$3,000,000 to \$5,000,000 (100% of total revenues).
- Type of Banking Service
  - Processing Services 100%
    - Remote Computing
    - Interactive
- Banking Industry Specialization
  - Savings & loan institutions.
- Major Clients
  - The company has 80 clients including their parent organization. The company would not provide specific names of other clients.
- Major Competitors
  - Company would not provide.
- Sales Offices
  - Houston, Dallas, Atlanta and New Orleans.
- Geographic Concentration
  - South Central Region: Texas, Louisiana, Georgia, Alabama, Oklahoma and Mississippi.
- Data Center Locations
  - Houston, Dallas, Atlanta and New Orleans.

- Computer Hardware

- IBM 370/135's are used in their four data centers.

## BANKING PRODUCTS/SERVICES

- SALTS (Savings and Loan Total System) was developed in 1971 and is the nucleus of all applications available on their network. Major applications available under SALTS are:

- General ledger.
- Mortgage loans.
- Construction loans.
- Loan commitments.
- Loan servicing.
- Installment loans.
- Saving and certificate deposits.

- Other applications available under SALTS include a full line of products to support S & L activities, such as:

- Escrow analysis.
- Home improvement loans.
- Bill paying system.
- Variable rate and term certificate of deposit.
- Automated draft system.
- On-line history.
- On-line tax and insurance.

- Total Systems also provides a retrieval package to clients. GEARS (Generalized Extracting and Reporting System) enables users to obtain reports from any SALTS customer records files.

- Total Systems also provides EFTS services through their subsidiary, Transfer Systems Inc. EFTS services currently available are:

- Direct deposit of Social Security checks.
- Statement saving.
- Plastic cards (TOTALCARD).
- Bill paying service (PAY-n-SAVE).
- Automatic fixed reoccurring drafts (TOTALMATIC).

## IMPACT ON CITITRAN

- Total Systems specializes in providing remote computing services to savings and loan institutions in the South. They are a regional processing company, owned and controlled by a Texas S&L group.
- To the extent that Total could provide the DDA applications to S&L's offering NOW accounts, they are a potential, but extremely minor competitor of CITITRAN.





**U.S. DATACORP**  
5075 SW Griffith Drive  
Beaverton, OR 97005  
(503) 641-7400

President: Richard McCall  
Ownership: Subsidiary of DSI  
Corporation  
Revenues: \$23.8 million (1978)  
Employees: 500

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## PROFILE

- Banking Industry Revenues

- \$5.3 million (22% of total revenues).

- Type of Banking Services

- Processing services 80%
  - Remote batch (10%)
  - Batch (60%)
  - Facilities management (30%)
- Turnkey systems 20%
- 100%

- Banking Industry Specialization

- Commercial banks, credit unions, savings and loan.

- Major Clients

- American National Bank.
- Bank of New York.
- Cleveland Trust.
- Lexington Bank.
- Mellon Bank.
- Union Bank.

- Major Competitors

- Computer Micrographics, Inc.
- Zytron Corporation

- Sales Offices

- Same as data processing centers.

## U.S. DATACORP

### • Employees

-	Marketing	25
-	Customer support	75
-	Computer operations	350
-	Administrative	<u>50</u>
	Total personnel	500

### • Geographic Concentration

- Clients are concentrated in areas surrounding the data centers.

### • Data Center Locations

- One in Alabama.
- Two in Arizona.
- Ten in California.
- One in Colorado.
- One in District of Columbia.
- One in Georgia.
- Three in Illinois.
- One in Kentucky.
- Two in Maryland.
- Two in Nevada.
- Two in New Jersey.
- One in New Mexico.
- Three in New York.
- One in Oregon.
- One in Oklahoma.
- Five in Pennsylvania.
- Two in Utah.
- One in Washington.

### • Computer Hardware

- A typical data center has one Brunning OP-59 fiche duplicator, one Bell and Howell 3801 COM recorder, one Allen film processor, and 24X, 42X, 48X and 72X cameras.

## U.S. DATACORP

### PRODUCTS AND SERVICES

- U.S. Datacorp (USD) is the worlds largest producer of computer output microfilm (COM), offering processing services, facilities management and turnkey systems to all industry sectors, especially to banking.
- Processing Services:
  - USD began their COM processing services in 1969. They have a total of 2,000 clients in their 40 data centers. Sixty-five of these are banks.
  - Most business is done close to the data centers, permitting daily pick-up, processing and delivery. For clients far removed from a data center, USD provides remote computing capability.
- Facilities Management:
  - USD has a COM-FM program under which they operate an in-house facilities management COM service for larger companies. Approximately 42 are now under contract for this service..
  - USD also has a UCOM-FM arrangement where USD is allowed to use a customer's data center to do processing for outside clients. The host receives a discount from USD for allowing this service. USD presently has 20 such arrangements.
- Turnkey Systems:
  - USD markets custom turnkey systems to all industry sectors. The size and cost of the system is determined by the volume of COM to be processed. Systems are marketed to large firms who depend heavily on COM and to companies who do not have access to local data centers. Forty systems have been installed. Pricing of the COM turnkey system starts at \$15,000.
  - USD has a specialized COM software package, COMTREVIE, which is licensed with the turnkey system. The basic package is modified for each specific system to most efficiently serve the client.
  - Once a turnkey system is installed, a client may contract USD to perform COM-FM or UCOM-FM services.

## U.S. DATACORP

### COMPANY BACKGROUND

- Data Planning Corporation (DPC) was formed in 1959 to offer computer processing services to the Pacific Northwest. COM was first introduced in 1969. U.S. Bancorp purchased DPC in 1971 and renamed it U.S. Datacorp. U.S. Bancorp was forced to divest USD in 1976, and DSI Incorporated acquired them. U.S. Datacorp is now the only subsidiary of DSI.
- In 1978 USD purchased three companies: Valley Datacorp of Phoenix, Equitable Datacorp of Utah, and First Security Datacorp of Utah.
- USD sells a large amount of micrographic equipment to companies establishing in-house COM operations. Management predicts these sales will represent 33% of USD total revenues by 1980.

### IMPACT ON CITITRAN

- Because of USD's focus on COM applications the company is not now a CITITRAN competitor. However, they have the market and the inherent ability to sell, service, and manage systems that would be competitive to CITITRAN. In view of the relatively limited market potential for COM, in INPUT's view, back office bank processing would be a logical extension of the company's business.

VALLEY BANK OF NEVADA  
Business Services Division  
300 South Fourth Street  
Las Vegas, NV 89114  
(702) 386-1000

President: Kenneth Sullivan  
Ownership: Public (OTC)  
Assets: \$500 million (1978)  
Computer Service Revenues:  
\$1 million (1978)  
Employees: 392

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## PROFILE

- Banking Industry Revenues
  - \$50,000 (5% of total computer services revenues).
- Type Of Banking Services

- Processing services	90%
Batch services	
- Software products	<u>10%</u>
	100%
- Banking Industry Specialization
  - Savings and loan.
- Major Clients
  - Company refused to provide.
- Major Competitors
  - Company felt they have no significant competition in the geographic region they serve.
- Sales Offices
  - Headquarters location.
- Employees

- Total employees	392
- Total Business Services Division employees	55
. Marketing	5
. Operation	<u>50</u>
	55
- Geographic Concentration
  - Southern Nevada and Southern Utah.

## VALLEY BANK OF NEVADA

- Data Center Locations
  - Las Vegas, NV.
  - A northern Nevada City.
- Computer Hardware
  - One Burroughs B4700 mainframe.
  - One Burroughs B4800 mainframe.

## BANKING PRODUCTS AND SERVICES

- Valley Bank of Nevada Business Services Division (VBN) offers to outside clients the applications now provided to the parent, Valley Bank of Nevada. Thirty applications are available on the processing service and 12 can be purchased as software products. These include:
  - Account Reconciliation.
  - Central Information File.
  - Certificate of Deposit.
  - Christmas Club.
  - Commercial Loan.
  - Demand Deposit Accounting.
  - General Ledger.
  - Installment Loan.
  - IRA-KEOGH Accounting.
  - Mortgage Loan.
  - Overdraft Protection.
  - Passbook Savings.
  - Payroll.
  - Personal Loan.
  - Proof and Transit.
  - Statement Preparation.
  - Time Deposits.
  - Travel Clubs.
  - Trust services.
- Demand Deposit Accounting is available in an on-line mode; all other applications operate strictly in batch mode. All programs operate on Burroughs B4700 or larger machines with a minimum 40kb memory under MCP.
- Three savings and loan institutions now use the processing services. Their average monthly expenditure is \$300.
- Software products range in price from \$250-10,000. One year maintenance is included in the purchase price. Fifty packages have been sold to date.

## VALLEY BANK OF NEVADA

### COMPANY BACKGROUND

- Valley Bank of Nevada Business Division is part of Valley Bank of Nevada and shares its hardware. The Business Division was formed in 1967 to serve local financial institutions and Nevada gambling establishments. Ninety-five percent of the division's revenues comes from the gambling industry.
- Management hopes to add more savings and loan and some commercial banks to the processing service in 1979, bringing financial industry income up to 30% of the total processing revenues.
- The software packages are not actively marketed and represent a very small percentage of total revenues. No literature was presently available.

### IMPACT ON CITITRAN

- Nevada is not a very attractive market for computer services. Valley National Bank is a competitor to CITITRAN, but their area of influence is small. INPUT believes that if the chips were down, CITITRAN could compete in Las Vegas and Reno.





WEST FLORIDA DATA PROCESSING  
28 West Beach Drive  
Panama City, FL 32401  
(904) 769-2131

President: Max Lewis  
Ownership: Subsidiary of West  
Florida Natural Gas  
Revenues: \$700,000 (1978)  
Employees: 25

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## PROFILE

- Banking Industry Revenues

- \$175,000 (25% of total revenues).

- Type Of Banking Services

- Processing services 100%
- Batch services
- \_\_\_\_\_
- 100%

- Banking Industry Specialization

- Commercial banks.

- Major Clients

- Three banks in Northwest Florida; company refused to provide their names.

- Major Competitors

- Company would not provide.

- Sales Offices

- Headquarters location.

- Employees

- Marketing 2
- Customer support 10
- Computer operations 6
- Administrative 7
- \_\_\_\_\_
- Total personnel 25

- Geographic Concentration

- Northwest Florida.

## WEST FLORIDA DATA PROCESSING

- Data Center Locations
  - Headquarters location.
- Computer Hardware
  - One Burroughs B2740, no further information was available.

## BANKING PRODUCTS AND SERVICES

- West Florida Data Processing provides Demand Deposit Accounting (DDA) in batch mode for three local banks. The DDA package includes:
  - Account Reconciliation.
  - Negotiable Order Withdrawal (NOW) accounting.
  - Overdraft Protection.
  - Proof and Transit.
  - Revolving Credit.
  - Statement Preparation.
- West Florida Data Processing began this service to banks in 1970. The average customer expenditure is \$4,800 per month.

## COMPANY BACKGROUND

- West Florida Data Processing is a wholly owned subsidiary of West Florida Natural Gas. Twenty-five percent of their total revenues originate with the parent company.
- Other industries served on the West Florida Data Processing service include medical offices (10%) and cable television companies (40%).
- West Florida Data Processing does very little marketing to banks; no product literature is available.

## IMPACT ON CITITRAN

- West Florida Data Processing is an example of many small bank services who lack the capital and resources to compete. Their customers would be prime targets for CITITRAN.

WESTINGHOUSE COMPUTER AND  
INSTRUMENTATION DIVISION  
1200 West Colonial Drive  
Orlando, FL 32804  
(305) 843-7030

CEO: G. C. Turner  
Ownership: Division of Westinghouse  
Electric  
Revenues: \$100 million (1978)  
Employees: 1,000

and

OPERATING SOFTWARE PACKAGES  
GROUP  
2040 Ardmore Blvd.  
Pittsburgh, PA 15221  
(412) 256-5583

CEO: Leonard Abraham  
Ownership: Operating Group of  
Westinghouse Computer and  
Instrumentation Division  
Revenues: \$7.5 million (1978)  
Employees: 30

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## PROFILE

- Banking Industry Revenues
  - \$750,000 (.01% of Computer Division and 10% of Software Group revenues).
- Type Of Banking Services
  - Software products 100%
- Banking Industry Specialization
  - Commercial banks and savings and loan.
- Major Clients
  - American National Bank and Trust Company.
  - Arizona Bank.
  - Federal Reserve Bank of Chicago.
  - Gibraltar Savings and Loan.
  - Home Savings and Loan.
  - National Bank of Detroit.
  - Pacific National Bank of Washington.
  - United Penn Bank.
- Major Competitors
  - IBM.
  - Cincom Systems, Inc.
- Sales Offices
  - El Monte, CA.
  - Pittsburgh, PA.

WESTINGHOUSE COMPUTER AND INSTRUMENTATION DIVISION/  
OPERATING SOFTWARE PACKAGES GROUP

• Employees

- Total software group personnel 30
  - Marketing 10
  - Software services 20
- Total Computer Division personnel 1,000

• Geographic Concentration

- None. Products are marketed throughout the U.S.

• Computer Hardware

- One IBM System/370 Model 135 under DOS in Orlando for development purposes.

PRODUCTS AND SERVICES

- The Operating Software Packages Group (OSP) of Westinghouse Electric's Computer and Instrumentation Division (CID) markets utility packages to enhance IBM 360/370 systems under DOS, DOS/VS, or DOS/VSC. These are:
  - Disk-Utility System:
    - Disk to Disk Copy (COPYDD) enables user to copy an entire disk or any portion of it onto another disk. Files may be arranged, added, or deleted.
    - Disk to Tape Dump (COPYDT) allows users to dump files or entire disks to tape. Files can be deliberately dumped and rebuilt as they are restored.
    - Tape to Disk Restore (COPYTD) restores files which have been dumped to tape back to disk. Records may be deleted and parameter cards inserted.
    - Standalone Volume Emergency Restore (SAVER) provides users with the ability to recreate files in the event of software or hardware failure.
    - Track Print (WTRKPRT) will display any track on a disk device.
    - Package costs from \$2,500 under a ten year perpetual license. Nearly 3,000 packages have been sold to date. Maintenance is \$250 per year.
  - Westinghouse Teleprocessing Interface System (WESTI) serves as an interface between IBM 2260 and 3270 display terminal systems. The package costs from \$8,500 plus \$300 per year maintenance. Over 300 packages have been sold to date.

## WESTINGHOUSE COMPUTER AND INSTRUMENTATION DIVISION/ OPERATING SOFTWARE PACKAGES GROUP

- DOKUMNTR provides job documentation complete with table of contents and index. The package costs from \$4,500 plus \$500 maintenance.
- Disk Space Manager is an advanced disk control system. The package costs from \$4,500 plus \$400 maintenance.
- Job Monitor gives information and produces daily reports documenting how the computer was used. Information includes job name, phase name, start time, stop time, elapsed time, DOS overhead, job termination code, and idle time. The package sells for \$3,500 plus maintenance. Over 400 packages have been sold to date.
- SCEPTER permits on-line programming capability for IBM 360/370 machines under DOS. The package costs \$3,000 plus maintenance.

### COMPANY BACKGROUND

- The Operating Software Packages Group (OSP) was formed as part of Westinghouse Electric's Computer and Instrumentation Division (CID) in 1971. Utility software sales to banks now comprise 10% of the group's revenues and .01% of the division's revenues. The packages were originally developed for in-house use.
- CID has three operating divisions:
  - Instrumentation Group: manufactures and installs instruments and test equipment for the Department of Defense.
  - Digital Products Group: manufactures and integrates process and numerical control systems. Packages such as their energy control system are often controlled by a minicomputer.
  - Operating Software Packages Group: utility software packages for IBM 360/370 machines under DOS, DOS/VS, or DOS/VSC.
- OSP stated they did not plan any new application software offerings in the near future.

### IMPACT ON CITITRAN

- Westinghouse offers systems software packages to banks having IBM in-house host processors. As such they are not a threat to CITITRAN.





