

SECURITIES AND EXCHANGE COMMISSION

Washington, DC. 20549

FORM 10-Q

Quarterly Report Pursuant to Section 13 or 15 (d)  
of the Securities Exchange Act of 1934

For the quarterly period ended  
June 30, 1998  
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Commission File Number 0-19437  
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CELLULAR TECHNICAL SERVICES COMPANY, INC.  
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(Exact Name of Registrant as Specified in Its Charter)

Delaware  
-----

11-2962080  
-----

(State or Other Jurisdiction of  
Incorporation or Organization)

(I.R.S. Employer Identification No.)

2401 FOURTH AVENUE, SEATTLE, WASHINGTON 98121  
-----

(Address of Principal Executive Offices) (Zip Code)

Registrant's telephone number, including area code: (206) 443-6400  
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Not Applicable  
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(Former name, former address and former fiscal year, if changed since  
last report.)

Indicate by check mark whether the Registrant (1) has filed all  
reports required to be filed by Section 13 or 15(d) of the Securities Exchange  
Act of 1934 during the preceding 12 months (or for such shorter period that the  
Registrant was required to file such reports), and (2) has been subject to the  
filing requirements for the past 90 days. Yes  No

22,815,092 Common Shares were outstanding as of August 12, 1998.

CELLULAR TECHNICAL SERVICES COMPANY, INC.

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CELLULAR TECHNICAL SERVICES COMPANY, INC.

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

BALANCE SHEETS

(in 000's, except per share amounts)  
(unaudited)

	JUNE 30, 1998	DECEMBER 31, 1997
	-----	-----
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	\$ 2,613	\$ 3,448
Accounts receivable, net of allowances of \$51 in 1998 and \$187 in 1997	2,213	3,190
Inventories, net	4,190	6,428
Prepaid expenses and other current assets	329	300
	-----	-----
Total Current Assets	9,345	13,366
PROPERTY AND EQUIPMENT, net	2,857	3,964
SOFTWARE DEVELOPMENT COSTS, net	2,367	3,391
	-----	-----
TOTAL ASSETS	\$ 14,569	\$ 20,721
	-----	-----
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable and accrued liabilities	\$ 2,055	\$ 2,799
Payroll related liabilities	471	792
Taxes (other than payroll and income)	113	549
Customers' deposits	7	15
Deferred revenue	3,696	2,676
	-----	-----
Total Current Liabilities	6,342	6,831
STOCKHOLDERS' EQUITY		
Preferred Stock, \$0.01 par value per share, 5,000 shares authorized, none issued and outstanding		
Common Stock, \$0.001 par value per share, 30,000 shares authorized, 22,815 and 22,795 shares issued and outstanding in 1998 and 1997, respectively	23	23
Additional paid-in capital	29,931	29,889
Accumulated Deficit	(21,727)	(16,022)
	-----	-----
Total Stockholders' Equity	8,227	13,890
	-----	-----
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	\$ 14,569	\$ 20,721
	-----	-----

The accompanying notes are an integral part of these financial statements.

## CELLULAR TECHNICAL SERVICES COMPANY, INC.

## STATEMENTS OF OPERATIONS

(in 000's, except per share amounts)  
(unaudited)

	THREE MONTHS ENDED JUNE 30,		SIX MONTHS ENDED JUNE 30,	
	1998	1997	1998	1997
REVENUES				
Systems	\$ 1,581	\$ 5,612	\$ 3,323	\$22,439
Services	1,842	1,113	3,522	1,654
Total Revenues	3,423	6,725	6,845	24,093
COSTS AND EXPENSES				
Cost of systems and services	4,649	3,737	7,144	12,112
Sales and marketing	248	989	637	2,383
General and administrative	592	877	1,399	1,771
Research and development	1,577	2,162	3,080	4,501
Loss on disposal of assets	288	0	329	0
Total Costs and Expenses	7,354	7,765	12,589	20,767
INCOME (LOSS) FROM OPERATIONS	(3,931)	(1,040)	(5,744)	3,326
INTEREST INCOME, net	15	44	39	92
INCOME (LOSS) BEFORE INCOME TAXES	(3,916)	(996)	(5,705)	3,418
PROVISION FOR INCOME TAXES	0	0	0	0
NET INCOME (LOSS)	\$(3,916)	\$ (996)	\$(5,705)	\$ 3,418
EARNINGS (LOSS) PER SHARE:				
Basic	\$ (0.17)	\$ (0.04)	\$ (0.25)	\$ 0.15
Diluted	\$ (0.17)	\$ (0.04)	\$ (0.25)	\$ 0.15
WEIGTED AVERAGE SHARES OUTSTANDING:				
Basic	22,815	22,696	22,810	22,668
Diluted	22,815	22,696	22,810	23,202

The accompanying notes are an integral part of these financial statements.

## CELLULAR TECHNICAL SERVICES COMPANY, INC.

## STATEMENTS OF CASH FLOWS

(in 000's)  
(unaudited)

	SIX MONTHS ENDED JUNE 30,	
	1998	1997
OPERATING ACTIVITIES		
Net income (loss)	\$(5,705)	\$ 3,418
Adjustments to reconcile net income (loss) to net cash (used in) provided by operating activities:		
Depreciation and amortization of property and equipment	778	580
Amortization and write off of software development costs	1,594	610
Loss on disposal of assets	329	0
Provision for accounts receivable reserves	(58)	112
Provision for inventory reserves	1,480	258
Issuance of common stock	42	0
Changes in operating assets and liabilities:		
Decrease in accounts receivable	1,035	4,752
Decrease in inventories	758	1,793
(Increase) decrease in prepaid expenses and other current assets	(29)	279
(Decrease) in accounts payable and accrued liabilities	(744)	(4,542)
(Decrease) increase in payroll related liabilities	(321)	301
(Decrease) in taxes (other than payroll and income)	(436)	(98)
(Decrease) in customers' deposits	(8)	(4,588)
Increase in deferred revenue	1,020	1,599
	-----	-----
NET CASH (USED IN) PROVIDED BY OPERATING ACTIVITIES	(265)	4,474
INVESTING ACTIVITIES		
Purchase of property and equipment	(155)	(1,458)
Proceeds from sale of assets	155	0
Capitalization of software development costs	(570)	(791)
	-----	-----
NET CASH USED IN INVESTING ACTIVITIES	(570)	(2,249)
FINANCING ACTIVITIES		
Proceeds from exercise of stock options	0	712
	-----	-----
NET CASH PROVIDED BY FINANCING ACTIVITIES	0	712
	-----	-----
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(835)	2,937
CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD	3,448	4,854
	-----	-----
CASH AND CASH EQUIVALENTS AT END OF PERIOD	\$ 2,613	\$ 7,791
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The accompanying notes are an integral part of these financial statements.

## NOTES TO FINANCIAL STATEMENTS

## NOTE A - BASIS OF PRESENTATION

The accompanying unaudited financial statements of Cellular Technical Services Company, Inc. (the "Company"), including the December 31, 1997 balance sheet which has been derived from audited financial statements, have been prepared in accordance with generally accepted accounting principles for interim financial information and with the instructions to Form 10-Q and Rule 10-01 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements. In the opinion of management, all adjustments (consisting of normal recurring accruals) considered necessary for a fair presentation have been included. The operating results for the three and six month periods ended June 30, 1998, are not necessarily indicative of the results that may be expected for the fiscal year ending December 31, 1998. For further information, refer to the financial statements and footnotes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 1997 and Form 10-Q for the three months ended March 31, 1998.

## NOTE B - INVENTORIES:

Inventory consists of the following (in 000's):

	JUNE 30, 1998	DECEMBER 31, 1997
	-----	-----
Raw materials and components	\$ 1,961	\$ 2,571
Work in process and finished components	5,257	5,954
	-----	-----
	7,218	8,525
Less inventory reserves	(3,028)	(2,097)
	-----	-----
	\$ 4,190	\$ 6,428
	-----	-----
	-----	-----

## NOTE C - CONTINGENCIES:

The following legal matters are outstanding as of June 30, 1998:

Between July 1997 and September 1997, eight separate lawsuits were filed against the Company, its Chairman of the Board and Chief Executive Officer, and its former President and Chief Operating Officer. The lawsuits were filed in the United States District Court for the Western District of Washington at Seattle, and have now been consolidated. A revised consolidated complaint was filed by plaintiffs on February 17, 1998. The complaint purports to assert claims on behalf of the class of persons, other than defendants and their affiliates, who purchased the Company's common stock or call options on the Company's common stock, or who sold put options on the Company's common stock, during the period March 6, 1996 through July 30, 1997, inclusive (the "Class Period"). The complaint alleges that the defendants made false or misleading statements and failed to disclose material facts during the Class Period in violation of the federal securities laws. The plaintiffs in this lawsuit seek damages in an unspecified amount. The Company believes this lawsuit is without merit and is vigorously defending against it.

On January 13, 1998, Communications Information Services, Inc. filed an action against the Company and AirTouch Communications, Inc. for alleged infringement of United States Patent No. 5,329,591 ("the '591 patent") in the United States District Court for the Northern District of Georgia at Atlanta. The complaint asserts

## NOTES TO FINANCIAL STATEMENTS (CON'T)

that the plaintiff is the exclusive licensee of all rights under the '591 patent. The complaint alleges that the Company's cellular telephone fraud prevention technology infringes the '591 patent, and seeks damages in unspecified amounts. The Company believes this lawsuit is without merit and is vigorously defending against it.

Although no estimate of any outcome of the above lawsuits can currently be made, an unfavorable resolution of such suits could materially affect the Company's financial position, liquidity or results of operations. The Company is also a party to other legal proceedings which arise from time to time in the ordinary course of business and/or which management believes will be resolved without a material adverse effect on the Company's financial position, liquidity or results of operations.

## NOTE D - RECENT ACCOUNTING STANDARDS:

The Financial Accounting Standards Board released Statement of Financial Accounting Standards No. 130, "Reporting Comprehensive Income" ("SFAS No. 130"), governing the reporting and display of comprehensive income and its components, and Statement of Financial Accounting Standards No. 131, "Disclosures About Segments of an Enterprise and Related Information" ("SFAS No. 131"), requiring that all public businesses report financial and descriptive information about their reportable operating segments. Both statements are applicable to reporting periods beginning after December 15, 1997. The adoption of SFAS Nos. 130 and 131 is not applicable to the Company at this time, nor to the financial statements or notes to the financial statements.

## NOTE E - EARNINGS PER SHARE

The calculation of basic and diluted earnings per share is as follows (in 000's, except per share amounts):

	THREE MONTHS ENDED JUNE 30,		SIX MONTHS ENDED JUNE 30,	
	1998	1997	1998	1997
Net (loss) income	\$ (3,916)	\$ (996)	\$ (5,705)	\$ 3,418
Weighted average number of shares:				
for basic earnings per share	22,815	22,696	22,810	22,668
Effect of dilutive securities:				
Employee stock options	-	-	-	534
Weighted average number of shares:				
for diluted earnings per share	22,815	22,696	22,810	23,202
(Loss) net income per share - Basic	\$ (0.17)	\$ (0.04)	\$ (0.25)	\$ 0.15
(Loss) net income per share - Diluted	\$ (0.17)	\$ (0.04)	\$ (0.25)	\$ 0.15

## NOTE F - RECLASSIFICATIONS:

Certain reclassifications have been made to the prior period financial statements to conform to the current period's presentation.

## ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis provides information which management believes is relevant to an assessment and understanding of the Company's results of operations and financial condition. The discussion should be read in conjunction with the financial statements and notes thereto.

### SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This quarterly report on Form 10Q contains certain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Generally, such statements are indicated by words or phrases such as "anticipate," "expect," "intend," "the Company believes," and similar words and phrases. Such statements are based on current expectations and are subject to risks, uncertainties and assumptions. Certain of these risks are described in Item 7, "Business Risks" in the Company's Annual Report on Form 10K for the year ended December 31, 1997 and other filings with the Securities and Exchange Commission. Should one or more of these risks or uncertainties materialize or should underlying assumptions prove incorrect, actual results may vary materially from those results anticipated, expected, intended or believed.

### OVERVIEW

The Company has developed the Blackbird-R- Platform, PreTect-TM- cloning fraud prevention application, and related application products and services ("Blackbird Products") to address the wireless communications industry's need to more effectively combat cloning fraud. The Blackbird Platform has been engineered with an open architecture design to allow the Company and others to develop application products which could run on or exchange information with it. Prior to 1996, the Company's revenues had been primarily derived from the Company's Hotwatch-R- Platform and related application products and services ("Hotwatch Products"), which the Company no longer actively markets. Revenues from sales of Hotwatch Products have declined over the past two years, and are expected to continue to decline and most likely be eliminated in future years.

Since 1996, the Company has signed agreements with AirTouch Cellular and certain affiliates ("AirTouch"), Bell Atlantic Mobile ("BAM" formerly known as Bell Atlantic NYNEX Mobile), GTE Mobilnet of California Limited Partnership ("GTE-California"), GTE Mobilnet Service Corp. ("GTE Corp."), Ameritech Mobile Communications, Inc. ("Ameritech"), and SNET Mobility ("SNET") to deploy and support the Blackbird Products. From time to time, the Company also participates in trials of its products with the goal of gaining contracts with new customers. In this regard, the Company has completed two trials in which it passed all the required tests in the Asia Pacific Region. The sales cycle continues to be lengthy with these international opportunities, and whether either one or both of these international opportunities will result in any new business is unknown at this time.

The Company's revenues are derived from two sources: system revenues and service revenues. System revenues consist primarily of bundled hardware and software products. Revenues are recognized when all of the following conditions are met: persuasive evidence of an arrangement exists, delivery has occurred (contract criteria has been satisfied), the amount is fixed and determinable, and collectability is probable. Non-revenue generating obligations after delivery are not material. Service revenues consist primarily of hardware and software maintenance and related support services, and are recognized ratably over the period that maintenance coverage is provided, whether bundled with the system sale or contracted for separately. Prepaid or allocated maintenance and services are recorded as deferred revenues. Amounts billed and received on sales contracts before revenue is recognized are recorded as customer deposits.



Revenue recognition for the Company's systems varies by customer and by product. The significant factors used in determining revenue recognition generally include physical hardware and software delivery, definitions of system delivery, and customer acceptance. For those agreements which provide for payment based upon meeting actual performance criteria, the Company may record a portion of the systems revenues and the majority of the systems costs at shipment or during the early stages of a system deployment. In certain cases no systems revenues or systems costs may be recorded at time of shipment, while certain operating costs may be recorded during the deployment process. Accordingly, revenues and direct margins recorded by the Company can be expected to be lower in earlier periods of deployment and inconsistent from quarter to quarter, especially during the initial market deployments under new agreements. The resulting deferral of revenue is recognized in subsequent periods upon meeting the performance criteria specified in the applicable agreement. The Company does not operate with a significant revenue backlog.

In addition, the Company incurs substantial operating expenses during the system deployment, maintenance and support processes, primarily in the areas of installation, customer support, and research and development. The Company expects that its costs and expenses in these areas will be significantly lower in 1998 as compared to 1997, but will continue to be incurred in the future, due to the ongoing need to: (i) make investments in research and development; (ii) enhance its sales and marketing activities; (iii) enhance its manufacturing and hardware maintenance processes; (iv) enhance its customer support capabilities needed to service the potential product deployments in both domestic and international markets; and (v) enhance its general and administrative activities to support the Company's business.

#### MARKET TRENDS AND RECENT DEVELOPMENTS

The Company's future success will depend on the continued and expanded use of its existing products and services, its ability to develop new products and services to meet the needs of the wireless communications industry, and its ability to adapt existing products and services to keep pace with changes in the wireless communications industry. Certain industry trends affecting the Company's business are described below.

#### SHIFT TO DIGITAL NETWORKS

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Currently, the Company's Blackbird Products are used exclusively in analog cellular networks, although the Company believes that its Blackbird Products may be adaptable for use in digital networks, such as digital cellular and digital Personal Communications Services ("PCS") networks, but not without incurring significant additional expenses. The Company believes that the majority of domestic wireless telephone service today is provided in the analog mode, but that the industry is undertaking a shift to digital mode in many markets due to certain advantages of the digital mode, including expanded capacity, greater privacy and enhanced security. As a result, industry analysts project that the number of analog cellular phones will decline over time in favor of digital cellular and digital PCS phones.

#### EMERGENCE OF A-KEY AUTHENTICATION

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The technology used in existing analog and digital networks enables wireless carriers to incorporate various technologies to combat cloning fraud, including the RF fingerprinting method utilized by the Blackbird Products and cryptographic authentication. One form of cryptographic authentication, commonly known as "A-Key authentication," uses a complex algorithm derived from a mathematical cryptographic process containing a secret key (number) shared only by the phone and the carrier's network. Almost all digital and analog phones currently being distributed into the wireless communications system are now equipped with the A-Key capability. A-Key authentication is expected to be the most widely adopted cryptographic authentication by wireless carriers in the United States. A-Key technology in the digital mode (and to a lesser, but still significant, extent in an analog

mode) is now in extensive use by large cellular carriers in most of the largest domestic markets. Through the American National Standards Institute inter-switch signaling standard ANSI-41, A-Key authentication can now provide roaming protection between like-equipped vendors. The Company believes that such cryptographic authentication has been effective and could become increasingly effective in reducing cloning fraud, provided that it is not compromised. However, the Company believes that full deployment of A-Key authentication compliant with the ANSI-41 standard could take a number of years to complete. The Company believes that extensive efforts and cooperation among the large market carriers, small market carriers, wireless industry associations, and wireless technology providers is required to implement a fully-functional A-Key authentication system. Given such factors, the Company believes that subscribers of digital wireless networks will continue to be susceptible to cloning fraud while roaming in the analog mode.

#### MARKET PENETRATION OF CLONING FRAUD PREVENTION PRODUCTS

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A relatively small number of analog cellular carriers constitute the potential customers for Blackbird Products in the United States today. Currently, a large majority of cellular carriers in the largest domestic markets are using cloning fraud prevention products in varying degrees. The Company believes that the combined deterrent of RF fingerprinting, A-Key authentication, and other cloning fraud prevention technologies has significantly reduced cloning fraud in domestic markets. Although cloning fraud remains a serious concern for the wireless communications industry, the Company's customers have observed significant and continual reductions in cloning fraud since their initial successful deployments of the Company's Blackbird Products.

#### AFFECTS ON THE COMPANY'S BUSINESS

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As a result of the above trends, the Company has experienced and expects to continue to experience a significant decline in demand in the United States for its PreTect cloning fraud prevention application. The Company believes that similar declines in demand have occurred and will continue to occur for competing cloning fraud prevention technologies in the United States. The Company believes that this trend could also occur in international markets over time. The Company incurred significant operating losses in 1996 and 1997 during its initial years of deployment of the Blackbird Products and, in light of the above trends, such losses have continued during the first half of 1998.

In view of these market trends, the Company expects to continue its efforts to: (i) gain sales of Blackbird Products in both domestic and international markets, (ii) enhance its existing products and develop new products, including other application products utilizing the Blackbird platform, and (iii) pursue business opportunities that complement the Company's existing business, including strategic alliances with, and acquisitions of, complementary technologies and businesses. As part of these efforts, in January 1998, the Company began implementation of a strategic plan that has included, among other initiatives, streamlining the Company's operations to achieve more balance between expenses and revenues, and directing additional development efforts and resources toward new and complementary products to meet the ongoing needs of the wireless communications industry and generate new sources of revenue for the Company. As a result, the Company's workforce has been reduced to approximately 40 percent of staffing levels as of December 31, 1997. As part of this plan, the Company has reevaluated the recoverability of the capitalized software and inventory values recorded on its balance sheet. In this connection, during the quarter ended June 30, 1998, the Company recorded significant reserves and expenses against those values and will continue to reduce the estimated recoverability of those assets in the coming quarters if it is unsuccessful in generating significant sales of its existing Blackbird Products.

There can be no assurance that the Company will be able to successfully achieve further domestic or international market penetration, enhance existing products or develop new products, acquire complementary

technologies and businesses, or timely introduce and gain acceptance of such enhancements, new products, or complementary technologies in the marketplace. If the Company is unable, due to resource, technological or other constraints, to adequately anticipate or respond to changing market, customer or technological requirements, the Company's business, financial condition and results of operations will be materially adversely affected.

#### PROPOSED MERGER WITH US WIRELESS

In March 1998, the Company and U.S. Wireless Corporation ("US Wireless") announced the signing of a letter of intent which provided for the potential combination of the two companies. US Wireless develops and manufactures products designed to provide value-added services and features for the wireless communications industry, including caller-location and tracking, autonomous network management, and other applications. Among other things, the letter of intent called for the companies to seek no less than \$15 million in new financing. In May 1998, the Company announced that the proposed merger was called off due to the parties being unable to agree to certain terms and conditions of the proposed merger, including obtaining the requisite financing.

#### YEAR 2000 PROCESSING

The Company is currently utilizing internal resources to comprehensively identify and timely resolve the potential impact of the year 2000 and beyond on the processing of date-sensitive information by the Company's Blackbird Products, Hotwatch Products and its internal computerized information and support systems. The year 2000 problem is the result of software that uses two digits (rather than four) to define the applicable year. Thus any software or hardware that utilizes time-sensitive coding may recognize a date using "00" as the year 1900 rather than the year 2000, which could result in miscalculations or system failures. The Company has completed the majority of work required to address its year 2000 processing issues. Costs incurred to date in this area have not been significant and costs to complete are not currently expected to have a material adverse impact on the Company's financial position, results of operations, or cash flows in future periods. If, however, the Company, its customers, or vendors are unable to adequately resolve any processing issues not yet addressed in a timely manner, the Company's operations and financial results may be adversely affected.

#### THREE MONTHS ENDED JUNE 30, 1998 COMPARED TO THREE MONTHS ENDED JUNE 30, 1997

Total revenues decreased 49% to \$3.4 million in 1998 from \$6.7 million in 1997 and resulted in the Company incurring a net loss of \$3.9 million, or \$0.17 per share in 1998, compared to net loss of \$1.0 million, or \$0.04 per share in 1997.

The Company attributes the lower revenue to: (i) a reduction in domestic market opportunities for the Company's cloning fraud prevention technology, due to the effectiveness of this and other authentication-based products in combating cloning fraud; (ii) lower penetration than originally planned of Blackbird Platform systems into existing customers' markets and to new and/or additional markets; and (iii) the continued uneven sales cycle of, and lengthy trial periods required for, potential new domestic and international customers. The Company's shipment trends for the past four quarters (0, 26, 50, and 105 units respectively for the quarters ended September 30, 1997, December 31, 1997, March 31, 1998 and June 30, 1998, respectively) have improved after solving certain software issues encountered during the second quarter of 1997. However the Company has not been able to generate a level of new orders in the first half of 1998, or through the current date, that would result in profitability in the immediate future.

SYSTEMS REVENUES are generated from licensing and sales of the Company's proprietary software and hardware products, from the sale of third party equipment sold in support of the proprietary systems, and to a lesser extent,

fees earned associated with the installation and deployment of such systems. Systems revenues decreased 72% to \$1.6 million in 1998 from \$5.6 million in 1997, and primarily represent revenues from customers for the Company's Blackbird Products. System revenues from Hotwatch Products were \$0.2 million in 1998, an increase from \$0.1 million from 1997. The Company expects minimal Hotwatch revenue for the balance of 1998 and beyond.

SERVICE REVENUES are derived primarily from hardware and software maintenance, software upgrades and releases, No Clone Zone-SM- roaming fraud prevention services, system monitoring, and related professional services provided in support of the Company's currently deployed product base. These revenues increased 65% to \$1.8 million in 1998 from \$1.1 million in 1997. Approximately 92% and 88%, respectively, of the 1998 and 1997 total service revenues were derived from the Blackbird Products. This increase is attributable to growing service revenues originating from Blackbird Product deployments in 1996, 1997 and during the first half of 1998. The Company anticipates that total service revenues will increase during the balance of 1998 as a result of the anticipated acceptance of shipments made during this and prior periods.

COSTS OF SYSTEMS AND SERVICES, the majority of which relate to the Company's Blackbird Products, increased 24% to \$4.6 million in 1998 from \$3.7 million in 1997. Costs of systems and services are primarily comprised of the costs of: (i) equipment, which includes both proprietary and third-party hardware and, to a lesser extent, manufacturing overhead and related expenses; (ii) amortization of capitalized software development; (iii) system integration and installation; (iv) royalty fees related to the licensing of intellectual property rights from others; (v) customer support; and (vi) activities associated with the evaluation, rework and testing of replacement inventory parts returned from the field in connection with the Company's ongoing hardware maintenance service activities.

COSTS OF SYSTEMS AND SERVICES, as a percent of total revenues, were 136% and 56% for the 1998 and 1997 periods, respectively. The increased percentage cost for 1998 relative to 1997 reflects: (i) the 1997 higher revenue which in turn resulted in a greater leveraging of fixed overhead costs relating to manufacturing, installation and systems integration, in spite of the cost reductions implemented in connection with the Company's Strategic Plan as discussed above; (ii) an increase in the amount of inventory reserves to \$1.4 million in 1998 from \$0.2 million in 1997, reflecting provisions for excess inventory quantities resulting from lower future sales projections based on changing market conditions; and (iii) an increase in the amount of amortization of capitalized software costs to \$1.3 million in 1998 from \$0.3 million in 1997, reflecting an \$0.8 million adjustment to recoverability values resulting from lower future sales projection based on changing market conditions. Should sales of the Company's products not materialize to levels to achieve recoverability of the investments in both inventory and capitalized software, additional substantial reserves would be required in future quarters. The investments in inventory and capitalized software at June 30, 1998 are \$4.2 million and \$2.4 million, respectively.

Conversely, the Company benefited from increased service revenues that leveraged fixed customer support operating expenses. The Company believes that increased sales volumes, and/or an increase in the number of acceptances of previously shipped systems during the second quarter of 1998, would have provided higher margins by achieving even greater leverage of its fixed overhead costs in the manufacturing, installation and customer support operations.

SALES AND MARKETING EXPENSES decreased 75% to \$0.2 million in 1998, from \$1.0 million in 1997, and, as a percent of revenues, decreased to 7% in 1998 from 15% in 1997. The decrease in sales and marketing expenses resulted from: (i) lower staffing and related expenses in connection with the Company's 1998 Strategic Plan, as discussed above; (ii) reduced number of customer and industry events in which the Company participated; and (iii) lower incentive compensation expense, which varies with revenue.

GENERAL AND ADMINISTRATIVE EXPENSES decreased 32% to \$0.6 million in 1998 from \$0.9 million in 1997 and primarily reflect: (i) lower personnel and related expenses in connection with the Company's 1998 Strategic Plan, as discussed above; (ii) higher recruiting and moving expenses in 1997 relating primarily to the hiring of the Company's president; and (iii) annual recurring expenditures associated with preparation of the Company's annual report and proxy in connection with the Company's annual shareholders' meeting that were incurred in the second quarter of 1997 and are expected to be incurred in the fourth quarter of 1998.

RESEARCH AND DEVELOPMENT EXPENDITURES include the costs for research, design, development, testing, preparation of training and user documentation, and fixing and refining features for the software and hardware components included in the Company's current and future product lines. Research and development costs decreased 27% to \$1.6 million in 1998 from \$2.2 million in 1997. The decrease in expenditures in 1998 was primarily attributable to reduced staffing levels and prototype activities. Such expenditures were incurred in 1997 in association with the expansion of the Company's business. Software development costs of \$0.2 million were capitalized in 1998, a decrease from the \$0.4 million that were capitalized during 1997, and reflect lower expenditures for capitalizable development and enhancement activities of the Blackbird Products. Beginning in May 1998, the Company ceased capitalizing software development and enhancement costs. This change reflects the Company's ongoing recoverability review, as discussed above.

LOSS ON DISPOSAL OF ASSETS of \$0.3 million in 1998 relates to the loss on the sale of furniture and the unamortized balance of leasehold improvements associated with the consolidation of certain facilities at the Company's corporate offices during the second quarter of 1998. Additional facilities consolidation during the third quarter of 1998 is expected to result in additional losses on the disposal of assets, currently estimated to exceed \$0.3 million.

INTEREST INCOME (net of interest expense) decreased 66% to \$0.02 million in 1998 from \$0.04 million in 1997. The decrease was primarily attributable to lower average cash balances invested during 1998 as compared to 1997 and, to a lesser extent, miscellaneous interest charges from suppliers in association with the payment of supplier liabilities.

#### SIX MONTHS ENDED JUNE 30, 1998 COMPARED TO SIX MONTHS ENDED JUNE 30, 1997

Total revenues decreased 72% to \$6.8 million in 1998 from \$24.1 million in 1997 and resulted in the Company incurring a net loss of \$5.7 million, or \$0.25 per share in 1998, compared to net income of \$3.4 million, or \$0.15 per share in 1997.

The Company attributes the lower revenue to: (i) a reduction in domestic market opportunities for the Company's cloning fraud prevention technology, due to the effectiveness of this and other authentication-based products in combating cloning fraud; (ii) lower penetration than originally planned of Blackbird Platform systems into existing customers' markets and to new and/or additional markets; and (iii) the continued uneven sales cycle of, and lengthy trial periods required for, potential new domestic and international customers. The Company's shipment trends for the past four quarters (0, 26, 50, and 105 units respectively for the quarters ended September 30, 1997, December 31, 1997, March 31, 1998 and June 30, 1998, respectively) have improved after solving certain software issues encountered during the second quarter of 1997. However, the Company has not been able to generate a level of new orders in the first half of 1998, or through the current date, that would result in profitability in the immediate future.

SYSTEMS REVENUES decreased 85% to \$3.3 million in 1998 from \$22.4 million in 1997, and primarily represent revenues from customers for the Company's Blackbird Products. System revenues from Hotwatch Products were

\$0.2 million in 1998, as compared to \$0.5 million in 1997. The Company expects minimal Hotwatch revenue for the balance of 1998 and beyond.

SERVICE REVENUES increased 113% to \$3.5 million in 1998 from \$1.7 million in 1997. Approximately 93% and 84%, respectively, of the 1998 and 1997 total service revenues, were derived from the Blackbird Products. This increase is attributable to growing service revenues originating from Blackbird Product deployments in 1996, 1997 and during the first half of 1998. The Company anticipates that total service revenues will increase during the remainder of 1998 as a result of anticipated acceptance of the Company's Blackbird Products.

COSTS OF SYSTEMS AND SERVICES, the majority of which relate to the Company's Blackbird Products, decreased 41% to \$7.1 million in 1998 from \$12.1 million in 1997. Costs of systems and services, as a percent of total revenues, were 104% and 50% for the 1998 and 1997 periods, respectively. The increased percentage cost for 1998 relative to 1997 reflects: (i) the 1997 higher revenue which in turn resulted in a greater leveraging of fixed overhead costs relating to manufacturing, installation and systems integration; ii) an increase in the amount of inventory reserves to \$1.5 million in 1998 from \$0.3 million in 1997, reflecting provisions for excess inventory quantities resulting from lower future sales projections based on changing market conditions; and (iii) an increase in the amortization of capitalized software costs to \$1.6 million in 1998 from \$0.6 million in 1997, reflecting an \$0.8 million adjustment to recoverability values resulting from lower future sales projections based on changing market conditions. Should sales of the Company's products not materialize to levels to achieve recoverability of the investments in both inventory and capitalized software, additional substantial reserves would be required in future quarters. The investments in inventory and capitalized software at June 30, 1998 are \$4.2 million and \$2.4 million, respectively.

Conversely, the Company benefited from increased service revenues that leveraged fixed customer support operating expenses. The Company believes that increased sales volumes and/or an increase in the number of acceptances of previously shipped systems during the first half of 1998 would have provided higher margins by achieving even greater leverage of its fixed overhead costs in the manufacturing, installation and customer support operations.

SALES AND MARKETING EXPENSES decreased 73% to \$0.6 million in 1998, from \$2.4 million in 1997, and, as a percent of revenues, decreased to 9% in 1998 from 10% in 1997. The decrease in sales and marketing expenses resulted from: (i) lower staffing and related expenses in connection with the Company's 1998 Strategic Plan, as discussed above; (ii) reduced number of customer and industry events in which the Company participated; and (iii) lower incentive compensation expense, which varies with revenue.

GENERAL AND ADMINISTRATIVE EXPENSES decreased 21% to \$1.4 million in 1998 from \$1.8 million in 1997, primarily due to; (i) lower staffing and related expenses in connection with the Company's 1998 Strategic Plan, as discussed above; (ii) higher recruiting and moving expenses in 1997 relating primarily to the hiring of the Company's president; and (iii) annual recurring expenditures associated with preparation of the Company's annual report and proxy in connection with the Company's annual shareholders' meeting that were incurred in the second quarter of 1997 and are expected to be incurred in the fourth quarter of 1998.

RESEARCH AND DEVELOPMENT costs decreased 32% to \$3.1 million in 1998 from \$4.5 million in 1997. The decrease in expenditures in 1998 was primarily attributable to reduced staffing levels and prototype activities. Such expenditures were incurred in 1997 in association with the expansion of the Company's business. Software development costs of \$0.6 million were capitalized in 1998, a decrease from the \$0.8 million that were capitalized during 1997, and relate to the development and enhancement of the Blackbird Products. Beginning in May 1998, the Company ceased capitalizing software development and enhancement costs. This change reflects the Company's ongoing recoverability review, as discussed above.

LOSS ON DISPOSAL OF ASSETS of \$0.3 million in 1998 relates to the loss on the sale of furniture and the unamortized balance of leasehold improvements associated with the consolidation of certain facilities at the Company's corporate offices during the first half of 1998. Additional facilities consolidation during the third quarter of 1998 is expected to result in additional losses on the disposal of assets, currently estimated to exceed \$0.3 million.

INTEREST INCOME (net of interest expense) decreased 58% to \$0.04 million in 1998 from \$0.09 million in 1997. The decrease was primarily attributable to lower average cash balances invested during 1998 as compared to 1997 and, to a lesser extent, miscellaneous interest charges from suppliers in association with the payment of supplier liabilities.

#### LIQUIDITY AND CAPITAL RESOURCES

The Company's capital requirements have consisted primarily of funding: (i) software and hardware research and development; (ii) property and equipment requirements; (iii) working capital; and (iv) the Company's operating losses. The Company has historically funded these requirements through issuance of Common Stock (including proceeds from the exercise of warrants and options) and from operating profits in certain periods. On June 30, 1998, the Company's cash balance was \$2.6 million as compared to \$1.5 million on March 31, 1998 and \$3.4 million on December 31, 1997. The Company's working capital decreased to \$3.0 million at June 30, 1998 from \$4.9 million at March 31, 1998 and \$6.5 million at December 31, 1997.

CASH USED IN OPERATING ACTIVITIES amounted to \$0.3 million in 1998, as compared to cash provided by operating activities of \$4.5 million in 1997. The major factors contributing to the Company's reduced cash flow from operating activities in 1998 were: (i) the \$5.7 million loss that was recorded in 1998 as compared to the 1997 \$3.4 million net income that was recorded in 1997, both of which were net of non-cash items such as depreciation, amortization and asset reserves that were discussed above; and (ii) the net changes in the balances of the major working capital components affecting cash flow from operating activities as described below.

- (a) ACCOUNTS RECEIVABLE reduced in 1998 primarily as a result of: (I) lower second quarter 1998 revenues as compared to fourth quarter 1997 revenues; and (II) a changed receivable mix comprised of payment terms more favorable to the Company. Accounts receivable reduced in 1997 as a result of applying customer deposits received in the fourth quarter of 1996 to revenues recorded in 1997.
- (b) INVENTORIES decreased in 1998 as a result of: (I) systems sales requiring minimal inventory purchases; and (II) the addition of \$1.5 million to inventory reserves, primarily resulting from delayed sales, technology changes in the Company's cloning fraud interdiction methods and changing market conditions as discussed above. Inventories decreased in 1997 as a result of increased system sales during the first half of the year coupled with reduced purchasing and production.
- (c) ACCOUNTS PAYABLE AND ACCRUED LIABILITIES declined in 1998 due to: (I) the reduction of inventory purchases in response to reduced sales levels; and (II) a lower fixed cost structure resulting from implementation of the Company's 1998 Strategic Plan. These liabilities reduced in 1997 as the Company paid for the significant buildup in inventory that occurred during late 1996.
- (d) TAXES (OTHER THAN PAYROLL AND INCOME) decreased in both 1998 and 1997 to reflect payments made on certain liabilities accrued throughout 1997 and 1996 that were payable on an annual basis.
- (e) CUSTOMER DEPOSITS, WHICH WERE MINIMAL IN 1998, decreased in 1997 due to the application of deposits made in 1996 to first quarter 1997 revenues in accordance with the Company's revenue recognition policies.
- (f) DEFERRED REVENUE increased in both 1998 and 1997 primarily as a result of the growth of prepaid maintenance and service contracts related to system sales of the Blackbird Products.

CASH UTILIZED IN INVESTING ACTIVITIES totaled \$0.6 million and \$2.2 million in 1998 and 1997, respectively. The Company's capital requirements during such periods were for: (i) purchase of property and equipment, primarily

for furniture, leaseholds, and equipment associated with maintaining the Company's business; and (ii) capitalization of software development of the Blackbird Products. Expenditure levels for property and equipment for 1998 have been, and are expected to continue to be, lower in 1998 as compared to prior periods, due to the recent streamlining of operations that was undertaken to balance expenses and revenues of the Company. As discussed above, the Company does not expect to capitalize software development in the foreseeable future. At June 30, 1998, the Company had no significant commitments for capital expenditures. The Company, as part of its growth strategy, would consider the cost/benefit of purchasing software and/or hardware technology in the event that an attractive opportunity arises and the Company has either sufficient capital or the ability to raise capital to effect such transactions.

CASH PROVIDED BY FINANCING ACTIVITIES totaled \$0.7 million during 1997 and originated from the exercise of stock options. The Company's \$5.0 million line of credit from a major bank expired on June 30, 1998 and the Company is currently in the process of applying for the renewal of such line. The line of credit, if renewed, would be used, if required, to provide additional working capital and fund the Company's operations. There can be no assurance that such line will be renewed.

Historically, the Company has experienced uneven revenues, operating results (including significant losses) and cash flow during the past two and one-half years. Operating information during the past six quarters are as follows:

THREE MONTHS ENDED	REVENUES	INCOME (LOSS)	CASH PROVIDED FROM (USED IN) OPERATING ACTIVITIES
-----	-----	-----	-----
March 31, 1997	\$17,368	\$ 4,414	\$ 1,072
June 30, 1997	6,725	(996)	3,402
September 30, 1997	2,379	(4,749)	(3,432)
December 31, 1997	3,783	(3,715)	560
March 31, 1998	3,422	(1,789)	(1,450)
June 30, 1998	3,423	(3,916)	1,185

The uneven cash flow and operating results originate primarily from: (i) operating losses resulting from a combination of lower than expected revenues, an unbalanced cost structure in relation to those revenues and the changing market conditions discussed above, (ii) uneven quarterly sales; (iii) cash receipts associated with deferred revenue recognition; and (iv) varying payment terms contained in customer agreements. While the Company believes that its current cash reserves and projected cash flow from operations provide sufficient cash to fund its operations for at least the next twelve months, further delays in achieving profitability, failure to convert existing inventory into cash, and/or other changes in the Company's operating activities may require additional financing and/or further expense reductions.



PART II. OTHER INFORMATION

ITEM 6. EXHIBITS AND REPORTS ON FORM 8-K

a) EXHIBITS

27 Financial Data Schedule - filed only with EDGAR submission

- - - - -

b) REPORTS ON FORM 8-K

none

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

CELLULAR TECHNICAL SERVICES COMPANY, INC.

By: /s/ Michael E. McConnell

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Michael E. McConnell  
Vice President and Chief Financial Officer  
August 14, 1998



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6-MOS

DEC-31-1998		
JAN-01-1998		
JUN-30-1998		
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	0	
	2,264	
	51	
	4,190	
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6,342		0
0		0
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14,569		3,323
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	0	
	(5,705)	0
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	(0.25)	
	(0.25)	