



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  
September 30, 1998

Commission File Number 0-19437

CELLULAR TECHNICAL SERVICES COMPANY, INC.  
(Exact Name of Registrant as Specified in Its Charter)

Delaware

11-2962080

-----  
(State or Other Jurisdiction of (I.R.S. Employer Identification No.)  
Incorporation or Organization)

2401 Fourth Avenue, Seattle, Washington 98121

-----  
(Address of Principal Executive Offices) (Zip Code)

Registrant's telephone number, including area code: (206) 443-6400

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 November 12, 1998.



CELLULAR TECHNICAL SERVICES COMPANY, INC.

TABLE OF CONTENTS FOR FORM 10-Q

PART I. FINANCIAL INFORMATION.....	3
ITEM 1. FINANCIAL STATEMENTS.....	3
ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.....	8
PART II. OTHER INFORMATION.....	16
ITEM 6. EXHIBITS AND REPORTS ON FORM 8-K.....	16



Cellular Technical Services Company, Inc.

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

BALANCE SHEETS

(in 000's, except per share amounts)

	September 30, 1998 ----- (unaudited)	December 31, 1997 -----
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	\$ 1,976	\$ 3,448
Accounts receivable, net of allowances of \$58 in 1998 and \$187 in 1997	1,609	3,190
Inventories, net	2,875	6,428
Prepaid expenses and other current assets	279	300
	-----	-----
Total Current Assets	6,739	13,366
PROPERTY AND EQUIPMENT, net	2,513	3,964
SOFTWARE DEVELOPMENT COSTS, net	1,421	3,391
	-----	-----
TOTAL ASSETS	\$ 10,673 =====	\$ 20,721 =====
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable and accrued liabilities	\$ 1,456	\$ 2,799
Payroll related liabilities	353	792
Taxes (other than payroll and income)	64	549
Customers' deposits	7	15
Deferred revenue	3,013	2,676
	-----	-----
Total Current Liabilities	4,893	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	(24,174)	(16,022)
	-----	-----
Total Stockholders' Equity	5,780	13,890
	-----	-----
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	\$ 10,673 =====	\$ 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 September 30,		Nine Months Ended September 30,	
	1998	1997	1998	1997
REVENUES				
Systems	\$ 516	\$ 993	\$ 3,839	\$ 23,432
Services	1,900	1,386	5,423	3,040
Total Revenues	2,416	2,379	9,262	26,472
COSTS AND EXPENSES				
Cost of systems and services	3,373	3,356	10,515	15,468
Sales and marketing	124	744	762	3,127
General and administrative	516	1,298	1,920	3,069
Research and development	862	1,805	3,941	6,306
Loss on disposal of assets	5	0	334	0
Total Costs and Expenses	4,880	7,203	17,472	27,970
LOSS FROM OPERATIONS	(2,464)	(4,824)	(8,210)	(1,498)
INTEREST INCOME, net	17	75	56	167
NET LOSS	\$ (2,447)	\$ (4,749)	\$ (8,154)	\$ (1,331)
NET LOSS PER SHARE:				
Basic and Diluted	\$ (0.11)	\$ (0.21)	\$ (0.36)	\$ (0.06)
WEIGHTED AVERAGE SHARES OUTSTANDING:				
Basic and Diluted	22,815	22,780	22,811	22,705

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



CELLULAR TECHNICAL SERVICES COMPANY, INC.

STATEMENTS OF CASH FLOWS

(in 000's)  
(unaudited)

	Nine Months Ended September 30,	
	----- 1998 -----	----- 1997 -----
<b>OPERATING ACTIVITIES</b>		
Net loss	\$ (8,154)	\$ (1,331)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:		
Depreciation and amortization of property and equipment	1,120	897
Amortization and write off of software development costs	2,540	1,281
Loss on disposal of assets	334	0
(Reduction in) provision for accounts receivable reserves	(58)	498
Provision for inventory reserves	2,685	718
Other non cash charges	42	0
Changes in operating assets and liabilities:		
Decrease in accounts receivable	1,639	4,961
Decrease in inventories	868	1,585
Decrease in prepaid expenses and other current assets	21	272
(Decrease) in accounts payable and accrued liabilities	(1,342)	(4,700)
(Decrease) increase in payroll related liabilities	(439)	90
(Decrease) in taxes (other than payroll and income)	(485)	(96)
(Decrease) in customers' deposits	(7)	(4,588)
Increase in deferred revenue	337	1,455
	-----	-----
<b>NET CASH (USED IN) PROVIDED BY OPERATING ACTIVITIES</b>	<b>(899)</b>	<b>1,042</b>
<b>INVESTING ACTIVITIES</b>		
Purchase of property and equipment	(159)	(1,681)
Proceeds from sale of assets	156	0
Capitalization of software development costs	(570)	(1,227)
	-----	-----
<b>NET CASH USED IN INVESTING ACTIVITIES</b>	<b>(573)</b>	<b>(2,908)</b>
<b>FINANCING ACTIVITIES</b>		
Proceeds from exercise of stock options	0	748
	-----	-----
<b>NET CASH PROVIDED BY FINANCING ACTIVITIES</b>	<b>0</b>	<b>748</b>
	-----	-----
<b>NET DECREASE IN CASH AND CASH EQUIVALENTS</b>	<b>(1,472)</b>	<b>(1,118)</b>
<b>CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD</b>	<b>3,448</b>	<b>4,854</b>
	-----	-----
<b>CASH AND CASH EQUIVALENTS AT END OF PERIOD</b>	<b>\$ 1,976</b>	<b>\$ 3,736</b>
	=====	=====

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



CELLULAR TECHNICAL SERVICES COMPANY, INC.

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 nine month periods ended September 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 and six months ended June 30, 1998, respectively.

NOTE B - INVENTORIES:

Inventories consist of the following (in 000's):

	September 30, 1998	December 31, 1997
	-----	-----
Raw materials and components	\$ 1,885	\$ 2,571
Work in process and finished components	5,056	5,954
	-----	-----
	6,941	8,525
Less inventory reserves	(4,066)	(2,097)
	-----	-----
	\$ 2,875	\$ 6,428
	=====	=====

NOTE C - CONTINGENCIES:

The following legal matters are outstanding as of September 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 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.





CELLULAR TECHNICAL SERVICES COMPANY, INC.

NOTES TO FINANCIAL STATEMENTS (con't)

NOTE C - CONTINGENCIES (continued):

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 - NET LOSS PER SHARE:

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	1998	1997	1998	1997
Net loss	\$ (2,447)	\$ (4,749)	\$ (8,154)	\$ (1,331)
Weighted average number of shares: for basic net loss per share	22,815	22,780	22,811	22,705
Effect of dilutive securities: Employee stock options	-	-	-	-
Weighted average number of shares: for diluted earnings per share	22,815	22,780	22,811	22,705
Net Loss per share - Basic and Diluted	\$ (0.11)	\$ (0.21)	\$ (0.36)	\$ (0.06)

NOTE F - RECLASSIFICATIONS:

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



CELLULAR TECHNICAL SERVICES COMPANY, INC.

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"). The Hotwatch Products, which the Company no longer actively markets, were designed to provide credit management and prepaid billing applications and services to the wireless industry. 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 participated in product trials in various domestic and international markets, the efforts of which have been converted into agreements for certain domestic carriers described above. To date, the Company has not been successful in converting its efforts in its international trials to signed agreements. Whether any of its international opportunities will result in any new business is unknown at this time.

Revenues

The Company's revenues are derived from two sources: system revenues and service revenues.

System 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. Revenues are recognized when all of the following conditions are met: persuasive evidence of an arrangement exists, delivery has occurred (contract criteria have been satisfied), the amount is fixed and determinable, and collectability is probable. Non-revenue generating obligations after delivery are not material.

Service revenues are derived primarily from hardware and software maintenance (which may include an allocation of system revenue payments as warranty provisions), 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. Service revenues are recognized ratably over the period that the warranty or maintenance coverage is provided. Hardware





and software maintenance generally begins after system acceptance. Prepaid or allocated maintenance and/or services are recorded as deferred revenues.

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. Amounts billed and/or received on sales contracts before revenue is recognized are recorded as customer deposits.

#### Costs and Expenses

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 costs; (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.

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 and other areas will be significantly lower for the balance of 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; and (v) enhance its general and administrative activities.

#### 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

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

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

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

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 nine months 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 restructuring 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 one-third of staffing levels as of December 31, 1997. As an additional part of this plan, the Company has reevaluated the recoverability of the capitalized software and inventory values recorded on its balance sheet. In this regard, the Company has recorded significant reserves and expenses against those values during 1998, 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.





## Year 2000 Processing

The Company is currently utilizing internal resources and, where appropriate, outside resources to comprehensively identify and timely resolve the potential impact of the Year 2000 and beyond processing of date-sensitive information by the Company's three products and systems categories: Blackbird Products, Hotwatch Products and internal systems. Generally, Year 2000 processing issues are the result of software that use two digits (rather than four digits) to define the applicable year. Thus, for example, any software that utilizes date-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 believes that it has completed the majority of work required to address its Year 2000 processing issues. The general status of each of the three categories described above are as follows:

**Blackbird Products** - The Company has substantially completed its assessment of Year 2000 compliance for its Blackbird Products. The Company believes that its software incorporated in these products is Year 2000 compliant in all material respects. With respect to third-party software incorporated in these products, all vendors of such software have indicated that their software is Year 2000 compliant. In addition, the Company has tested and verified that the Blackbird Products, when used in conjunction with such third-party software, is Year 2000 compliant in all material respects.

**Hotwatch Products** - The Company's Hotwatch Products, which revenues are not currently material to the Company's financial position, results of operations, or cash flows, are not currently Year 2000 compliant. The Company has identified the aspects of these products that would require enhancements to become Year 2000 compliant, and is in the process of determining with its customers whether it will perform such enhancements. The Company expects that any Year 2000 compliance project for these products, if initiated, will be completed in a timely manner.

**Internal Systems** - With regard to the Company's internal systems used in its operations, the Company is in the process of identifying and testing all systems for Year 2000 compliance. To date, a majority of such systems have been confirmed to be either presently Year 2000 compliant in all material respects, or Year 2000 compliant with the purchase of readily-available software upgrades or alternatives that are currently identified to be Year 2000 compliant. The Company expects that all of its Year 2000 compliance projects for internal systems will be completed in a timely manner.

Costs incurred to date for Year 2000 compliance issues 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 its vendors are unable to adequately resolve any Year 2000 compliance issues not yet addressed in a timely manner, the Company's business, financial condition and/or results of operations may be adversely affected. In addition, the Company has on occasion agreed to warrant and/or indemnify certain of its customers for claims and losses arising out of the failure of its products to be Year 2000 compliant. There can be no assurance that the Company's current and future products and internal systems do not contain undetected errors related to Year 2000 that may result in material additional costs or liabilities that could have a material adverse effect on the Company's business, financial condition and/or results of operations. Further, to the extent that the Company is not able to test the technology provided to it by third parties for its own use or for redistribution, or to obtain adequate assurances from such third parties that their products are Year 2000 compliant, the Company may experience material additional costs or liabilities that could have a material adverse effect on the Company's business, financial condition, and/or results of operations.

THREE MONTHS ENDED SEPTEMBER 30, 1998 COMPARED TO THREE MONTHS ENDED SEPTEMBER 30, 1997

Total revenues remained constant at \$2.4 million in 1998 and 1997 and resulted in the Company incurring a net loss of \$2.4 million, or \$0.11 per share in 1998, compared to net loss of \$4.7 million, or \$0.21 per share in 1997.

System revenues decreased 50% to \$0.5 million in 1998 from \$1.0 million in 1997, and primarily represent revenues from customers for the Company's Blackbird Products. System revenues from Hotwatch Products were zero in 1998, as compared to \$0.3 million in 1997. The Company expects minimal Hotwatch revenue for the balance of 1998 and beyond. The Company attributes the decrease in revenues from Blackbird Products 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 five quarters (0, 26, 50, 105 and 0 units respectively for the quarters ended September 30, 1997, December 31, 1997, March 31, 1998, June 30, 1998 and September 30, 1998, respectively) had initially 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 three quarters of 1998, or through the current date, that would result in profitability in the immediate future.

Service revenues increased 36% to \$1.9 million in 1998 from \$1.4 million in 1997. Approximately 93% and 90%, 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 three quarters 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 the first two quarters of 1998 and prior periods.

Costs of systems and services, the majority of which relate to the Company's Blackbird Products, were \$3.4 million in 1998, unchanged from 1997. Costs of systems and services, as a percent of total revenues, were 140% and 141% for the 1998 and 1997 periods, respectively. While the percentages were similar, the components comprising costs of systems and services differed. These costs, as a percent of revenues, were negatively impacted by: (i) a decrease in systems revenues in 1998, resulting in a decreased leveraging of its fixed overhead costs relating to manufacturing, installation and systems integration, despite significant cost reductions implemented in 1998 in connection with the Company's strategic restructuring plan; (ii) an increase in the provision for inventory reserves to \$1.2 million in 1998 from \$0.5 million in 1997, reflecting excess inventory quantities resulting from lower future sales projections based on changing market conditions; and (iii) an increase in and the acceleration of the amount of amortization of capitalized software costs to \$0.9 million in 1998 from \$0.7 million in 1997, reflecting current estimates of 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 and amortization would be required in future quarters. The investments in inventory and capitalized software at September 30, 1998 are \$2.9 million and \$1.4 million, respectively. Conversely, the Company benefited from increased leveraging of fixed customer support operating expenses. The Company also benefited from cost reductions implemented in 1998 in connection with the Company's strategic restructuring plan.

Sales and marketing expenses decreased 83% to \$0.1 million in 1998, from \$0.7 million in 1997, and, as a percent of revenues, decreased to 5% in 1998 from 31% in 1997. The decrease in sales and marketing expenses resulted primarily from: (i) a reduction in staffing levels and related expenses in connection with the Company's strategic restructuring plan; (ii) reduction in trade shows and other events in which the Company participated; and (iii) lower incentive compensation expense, which varies with revenue.

General and administrative expenses decreased 60% to \$0.5 million in 1998 from \$1.3 million in 1997 and primarily reflect: (i) a reduction in staffing levels and related expenses in connection with the Company's strategic restructuring plan; (ii) reduction in legal expenses related to settled and pending legal proceedings; and (iii) no bad debt expense in 1998 compared to a bad debt expense of \$0.4 million in 1997.

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 52% to \$0.9 million in 1998 from \$1.8 million in 1997. The decrease in expenditures in 1998 was primarily attributable to reduced staffing levels and reduced hardware research activities associated with cost reductions implemented in 1998 in connection with the Company's strategic restructuring plan. No software development costs were capitalized in 1998, a decrease from the \$0.2 million that was capitalized during 1997. The decrease is attributable to the Company's decision, during the second quarter of 1998, to no longer capitalize software development and enhancement costs. This change reflects the Company's ongoing recoverability review, as discussed above.

Interest income (net of interest expense) decreased 77% to \$0.02 million in 1998 from \$0.08 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 connection with the payment of supplier liabilities.



NINE MONTHS ENDED SEPTEMBER 30, 1998 COMPARED TO NINE MONTHS ENDED SEPTEMBER 30, 1997

Total revenues decreased 65% to \$9.3 million in 1998 from \$26.5 million in 1997, resulting in the Company incurring a net loss of \$8.2 million, or \$0.36 per share in 1998, compared to net loss of \$1.3 million, or \$0.06 per share in 1997.

System revenues decreased 84% to \$3.8 million in 1998 from \$23.4 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 \$0.7 million in 1997. The Company expects minimal Hotwatch revenue for the balance of 1998 and beyond. The Company attributes the decrease in revenues from Blackbird Products 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 prior 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) had initially improved after solving certain software issues encountered during the second quarter of 1997. However, the Company did not ship any units in the most recent quarter and has not been able to generate a level of new orders in 1998, through the current date, that would result in profitability in the immediate future.

Service revenues increased 78% to \$5.4 million in 1998 from \$3.0 million in 1997. Approximately 93% and 85%, 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 three quarters 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 32% to \$10.5 million in 1998 from \$15.5 million in 1997. Costs of systems and services, as a percent of total revenues, were 114% and 58% for the 1998 and 1997 periods, respectively. The increased percentage cost for 1998 relative to 1997 primarily reflects: (i) a decrease in systems revenues in 1998, resulting in a decrease in leveraging of its fixed overhead costs relating to manufacturing, installation and systems integration, despite significant cost reductions implemented in 1998 in connection with the Company's strategic restructuring plan; (ii) an increase in the amount of inventory reserves to \$2.7 million in 1998 from \$1.3 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 and the acceleration of the amortization of capitalized software costs to \$2.5 million in 1998 from \$1.3 million in 1997, reflecting current estimates 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 and amortization would be required in future quarters. The investments in inventory and capitalized software at September 30, 1998 are \$2.9 million and \$1.4 million, respectively. Conversely, the Company benefited from increased service revenues in 1998, resulting in an increase in leveraging its fixed customer support operating expenses. The Company also benefited from cost reductions implemented in 1998 in connection with the Company's strategic restructuring plan.

Sales and marketing expenses decreased 76% to \$0.8 million in 1998, from \$3.1 million in 1997, and, as a percent of revenues, decreased to 8% in 1998 from 12% in 1997. The decrease in sales and marketing expenses resulted primarily from: (i) a reduction in staffing levels and related expenses in connection with the Company's strategic restructuring plan; (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 37% to \$1.9 million in 1998 from \$3.1 million in 1997, primarily due to: (i) a reduction in staffing levels and related expenses in connection with the Company's strategic restructuring plan; and (ii) no bad debt expense in 1998 as discussed above.

Research and development costs decreased 38% to \$3.9 million in 1998 from \$6.3 million in 1997. The decrease in expenditures in 1998 was primarily attributable

to reduced staffing levels and reduced hardware research activities associated with cost reductions implemented in 1998 in connection with the Company's strategic restructuring plan. Software



development costs of \$0.6 million were capitalized in 1998, a decrease from the \$1.2 million that were capitalized during 1997, and relate to the development and enhancement of the Blackbird Products. The decrease is attributable to the Company's decision, during the second quarter of 1998, to no longer capitalize 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 and equipment consolidation during the fourth 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 \$0.06 million in 1998 from \$0.17 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 connection 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 September 30, 1998, the Company's cash balance was \$2.0 million as compared to \$3.4 million on December 31, 1997. The Company's working capital decreased to \$1.8 million at September 30, 1998 from \$6.5 million at December 31, 1997. Approximately \$2.7 million (57%) of this working capital decline is attributable to increased inventory reserves, reflecting the Company's ongoing recoverability review, as discussed above.

Cash used in operating activities amounted to \$0.9 million in 1998, as compared to cash provided by operating activities of \$1.0 million in 1997. The major factors contributing to the Company's reduced cash flow from operating activities in 1998 were: (i) the \$8.2 million net loss that was recorded in 1998 as compared to the \$1.3 million net loss that was recorded in 1997, both of which were before considering the impact of non-cash items such as depreciation, amortization, loss on disposal of assets and inventory reserves as 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 declined \$1.6 million in 1998 primarily as a result of: (I) lower third quarter 1998 revenues of \$2.4 million as compared to fourth quarter 1997 revenues of \$3.8 million; and (II) a changed receivable mix comprised of payment terms more favorable to the Company
- (b) Inventories decreased \$3.6 million in 1998 primarily as a result of: (I) systems sales, the majority of which utilized existing inventory with only minimal inventory purchases required; and (II) the addition of \$2.7 million to inventory reserves for excess and obsolete inventory, primarily resulting from delayed sales, technology changes in the Company's cloning fraud interdiction methods and changing market conditions as discussed above
- (c) Accounts payable and accrued liabilities declined \$1.3 million in 1998 primarily due to: (I) a lower fixed cost structure resulting from implementation of the Company's 1998 strategic restructuring plan of inventory purchases in response to reduced sales levels.
- (d) Payroll related liabilities decreased 55%, or \$0.4 million in 1998 primarily as a result of substantial reduction in staffing levels and correspondingly lower liabilities for employee related benefits.
- (e) Taxes (other than payroll and income) decreased \$0.5 million in 1998 and reflect payments made on certain liabilities accrued throughout 1997 that were payable on an annual basis.
- (f) Deferred revenue increased \$0.3 million in 1998, resulting from the growth of prepaid maintenance and service revenues related to system sales of the Blackbird Products.





Cash utilized in investing activities totaled \$0.6 million and \$2.9 million in 1998 and 1997, respectively. The Company's capital requirements during such periods were primarily for: (i) purchase of property and equipment totaling \$0.2 million and \$1.7 million in 1998 and 1997 respectively, primarily for furniture, leaseholds, and equipment associated with maintaining the Company's business; and (ii) capitalization of software development costs of the Blackbird Products totaling \$0.6 million and \$1.2 million, respectively. 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 cost and expenditure reductions implemented in 1998 in connection with the Company's strategic restructuring plan. As discussed above, the Company does not expect to capitalize software development in the foreseeable future. At September 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. The Company did not utilize the bank line during the line's two year term and it has elected to defer its renewal process of the line of credit until completion of its 1999 business plan and further assessment of its financing needs.

Historically, the Company has experienced uneven revenues, operating results (including significant losses) and cash flow during the past several years. Operating information during the past seven quarters is as follows (in 000's):

Three Months ended	Revenues	Net Income (Loss)	Cash Provided From (Used in) Operating Activities	EBITDA+
March 31, 1997	\$17,368	\$ 4,414	\$ 1,072	\$ 5,466
June 30, 1997	6,725	(996)	3,402	(101)
September 30, 1997	2,379	(4,749)	(3,432)	(3,376)
December 31, 1997	3,783	(3,715)	560	(1,643)
March 31, 1998	3,422	(1,789)	(1,450)	(1,036)
June 30, 1998	3,423	(3,916)	1,185	(527)
September, 30 1998	2,416	(2,447)	(634)	34

The uneven operating results and cash flow from operations 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 shipments of systems; (iii) cash receipts associated with deferred revenue recognition; and (iv) varying payment terms contained in customer agreements.

The EBITDA+ information shown above reflects earnings (loss) before interest and taxes, and certain non-cash charges to operations for depreciation, amortization, loss on disposal of assets and inventory reserves. This is one of the Company's important cash flow monitoring tools in evaluating the effectiveness of its 1998 strategic restructuring plan. The plan was designed to focus on 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. To date, the results of the Company's 1998 plan are showing improvement towards its goals of achieving both consistent positive cash flow by the end of 1998 and profitability during 1999. 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, unanticipated changes in customer needs and/or other external factors 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

The Company filed a Current Report on Form 8-K, dated September 23, 1998, under Item 5 of such Report, relating to the Company's naming Joyce Jones as the new Chief Operating Officer of the Company and a member of the Board of Directors effective September 18, 1998. No financial statements were included in such Report.

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

-----  
Michael E. McConnell  
Vice President and Chief Financial Officer  
November 12, 1998

Page 16

STATEMENT OF DIFFERENCES

-----  
The trademark symbol shall be expressed as..... 'TM'  
The registered trademark symbol shall be expressed as..... 'r'  
The service mark symbol shall be expressed as..... 'sm'



DEC-31-1998  
JAN-01-1998  
SEP-30-1998  
9-MOS  
1,976  
0  
1,667  
58  
2,875  
6,739  
7,321  
4,808  
10,673  
4,893  
0  
23  
0  
5,757  
10,673  
3,839  
9,262  
10,515  
17,472  
0  
0  
0  
(8,154)  
0  
(8,154)  
0  
0  
0  
(8,154)  
(0.36)  
(0.36)