Lightwave Logic, Inc.
Form 10-Q
August 14, 2009

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON D.C. 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended June 30, 2009

¨ Transition Report Under Section 13 or 15(d) of the Securities Exchange Act of 1934

For the transition period from _______________ to _______________

Commission File 0-52567

Lightwave Logic, Inc.

(Exact name of registrant as specified in its charter)

Nevada	82-049-7368
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification Number)

121 Continental Drive, Suite 110, Newark, Delaware 19713

(Address of Principal Executive Offices)(Zip Code)

(302) 356-2717

(Registrant s Telephone Number, Including Area Code)

(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 past 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ý No x

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ý. No ¨.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act.

Large accelerated filer	¨	Accelerated filer	¨
Non-accelerated filer	¨	Smaller reporting company	ý

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ¨ No ý

APPLICABLE ONLY TO CORPORATE ISSUERS

As of August 14, 2009, there were approximately 40,711,542 shares of common stock, $0.001 par value, issued and outstanding.

LIGHTWAVE LOGIC, INC.

Form 10-Q Index

June 30, 2009

PART I - FINANCIAL INFORMATION

Item 1.

Financial Statements

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

BALANCE SHEETS

		June 30, 2009 (Unaudited)		December 31, 2008 (Audited)
ASSETS				
CURRENT ASSETS				
Cash and cash equivalents	$	795,962	$	88,225
Prepaid expenses		5,331		12,198
		801,293		100,423
PROPERTY AND EQUIPMENT - NET		55,378		61,726
OTHER ASSETS				
Intangible assets		215,561		212,416
TOTAL ASSETS	$	1,072,232	$	374,565
LIABILITIES AND STOCKHOLDERS' EQUITY				
CURRENT LIABILITIES				
Accounts payable	$	19,303	$	62,650
Accounts payable - related party		-		7,172
Accrued expenses		42,088		98,205
		61,391		168,027

CONTINGENCY				
TOTAL LIABILITIES		61,391		168,027
STOCKHOLDERS' EQUITY				
Preferred stock, $0.001 par value, 1,000,000 authorized				
No shares issued or outstanding		-		-
Common stock $0.001 par value, 100,000,000 authorized 40,711,542 and 35,911,156 issued and outstanding at June 30, 2009 and December 31, 2008		40,712		35,911
Additional paid-in-capital		16,363,332		14,196,060
Subscription receivable		-		(12,500)
Deferred charges		-		(55,330)
Accumulated deficit		(15,827)		(15,827)
Deficit accumulated during development stage		(15,377,376)		(13,941,776)
TOTAL STOCKHOLDERS' EQUITY		1,010,841		206,538
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$	1,072,232	$	374,565

See accompanying notes to these financial statements.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

STATEMENTS OF OPERATIONS FOR THE THREE AND SIX MONTHS ENDING

JUNE 30, 2009 AND 2008 AND FOR THE PERIOD

JANUARY 1, 2004 (INCEPTION OF DEVELOPMENT STAGE) TO JUNE 30, 2009

(UNAUDITED)

	Cumulative Since Inception	For the Three Months Ending June 30, 2009	For the Three Months Ending June 30, 2008	For the Six Months Ending June 30, 2009	For the Six Months Ending June 30, 2008
NET SALES	$ -	$ -	$ -	$ -	$ -
COST AND EXPENSE					
Research and development	6,008,208	272,920	254,881	722,636	630,771
General and administrative	9,322,690	404,701	1,226,427	711,969	1,815,472
	15,330,898	677,621	1,481,308	1,434,605	2,446,243
LOSS FROM OPERATIONS	(15,330,898)	(677,621)	(1,481,308)	(1,434,605)	(2,446,243)
OTHER INCOME (EXPENSE)					
Interest income	29,442	6	4,041	8	8,666
Dividend income	1,551	-	-	-	-
Realized gain (loss) on investment	3,911	-	(108)	-	(108)
Realized gain on disposal of assets	637	-	-	-	-
Litigation settlement	(47,500)				(47,500)
Interest expense	(34,519)	(588)	(685)	(1,003)	(1,527)

NET LOSS	$ (15,377,376)	$ (678,203)	$ (1,478,060)	$ (1,435,600)	$ (2,486,712)
Basic and Diluted Loss per Share		$ (0.02)	$ (0.04)	$ (0.04)	$ (0.07)
Basic and Diluted Weighted Average Number of Shares		38,341,509	34,699,069	37,876,736	34,246,669

See accompanying notes to these financial statements.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

STATEMENTS OF COMPREHENSIVE LOSS

FOR THE THREE MONTHS AND SIX MONTHS ENDING JUNE 30, 2009 AND 2008 AND FOR THE PERIOD JANUARY 1, 2004 (INCEPTION OF DEVELOPMENT STAGE) TO JUNE 30, 2009

(UNAUDITED)

	Cumulative Since Inception	For the Three Months Ending June 30, 2009	For the Three Months Ending June 30, 2008	For the Six Months Ending June 30, 2009	For the Six Months Ending June 30, 2008
NET LOSS	$ (15,377,376)	$ (678,203)	$ (1,478,060)	$ (1,435,600)	$ (2,486,712)
OTHER COMPREHENSIVE INCOME (LOSS)					
Unrealized gain (loss) on Available for Sale Securities	-	-	(24,507)	-	7,951
COMPREHENSIVE LOSS	$ (15,377,376)	$ (678,203)	$ (1,502,567)	$ (1,435,600)	$ (2,478,761)

See accompanying notes to these financial statements.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

STATEMENT OF STOCKHOLDERS EQUITY

FOR THE PERIOD JANUARY 1, 2004 (INCEPTION OF DEVELOPMENT STAGE) TO

JUNE 30, 2009

(UNAUDITED)

	Number of Shares	Common Stock	Paid-in Capital	Subscription Receivable	Deferred Charges	Unrealized Loss on Securities	Accumulated Deficit	Deficit Accumulated During Development Stage	To
NG ANCE AT EMBER 03	100	$ 1	$ -	$ -	$ -	$ -	$ (15,827)	$ -	$ (1
active talization reverse ition	706,973	706	(706)	-	-	-	-	-	
ANCE AT ARY 1,	707,073	707	(706)	-	-	-	(15,827)	-	(1
non stock to ers	13,292,927	13,293	(13,293)	-	-	-	-	-	
non stock for services 2004 at share	1,600,000	1,600	254,400	-	-	-	-	-	25
non stock at	2,000,000	2,000	(2,000)	-	-	-	-	-	

r									
non stock for services gust 2004 12/share	637,500	638	74,362	-	-	-	-	-	7
ersion of ayable in nber 2004 16/share	187,500	187	29,813	-	-	-	-	-	3
ss for the nded nber 31,	-	-	-	-	-	-	-	(722,146)	(72
ANCE AT EMBER 04	18,425,000	18,425	342,576	-	-	-	(15,827)	(722,146)	(37
non stock in e ment in 2005 at share	4,000,000	4,000	996,000	-	-	-	-	-	1,00
ersion of payable in 005 at share	3,118,750	3,119	495,881	-	-	-	-	-	49
ription able	-	-	-	(6,500)	-	-	-	-	(
non stock for services gust 2005, l at share	210,000	210	585,290	-	-	-	-	-	58
non stock for services gust 2005, l at share	200,000	200	583,800	-	-	-	-	-	58
nts issued rvices in 005, during valued at	-	-	37,000	-	-	-	-	-	3

/share									
nts issued rvices in mber vested ; 2005, l at /share	-	-	24,200	-	-	-	-	-	2
nts issued rvices in er 2005, during valued at /share	-	-	15,900	-	-	-	-	-	1
nts issued ure es in nber vested ; 2005, l at /share	-	-	435,060	-	-	-	-	-	43
red es for on stock for services gust 2005, l at /share	-	-	-	-	(584,000)	-	-	-	(58
tization of ed es	-	-	-	-	265,455	-	-	-	26
ise of nts in nber 2005 25/share	300,000	300	74,700	-	-	-	-	-	7
ss for the nded nber 31,	-	-	-	-	-	-	-	(1,721,765)	(1,72
ANCE AT EMBER 05	26,253,750	26,254	3,590,407	(6,500)	(318,545)	-	(15,827)	(2,443,911)	83
non stock in	850,000	850	424,150	-	-	-	-	-	42

e ment ; 2006 at /share									
non stock for services ruary valued at /share	300,000	300	269,700	-	-	-	-	-	27
non stock for services y 2006, l at /share	400,000	400	619,600	-	-	-	-	-	62
non stock for services e 2006, l at /share	25,000	25	36,225	-	-	-	-	-	3
non stock for services vember valued at /share	60,000	60	29,340	-	-	-	-	-	2
nts issued rvices in mber vested ; 2006, l at /share	-	-	66,500	-	-	-	-	-	6
nts issued ure es in June vested ; 2006, l at /share	-	-	465,996	-	-	-	-	-	46
ns issued rvices in ary 2006, during valued at /share	-	-	428,888	-	-	-	-	-	42
	-	-	35,624	-	-	-	-	-	3

buted l related rued st									
ription able	-	-	-	6,500	-	-	-	-	
ization of ed es	-	-	-	-	318,545	-	-	-	31
lzed gain on ties	-	-	-	-	-	(26,000)	-	-	(2(
ss for the nding nber 31,	-	-	-	-	-		-	(2,933,809)	(2,93
ANCE AT EMBER 06	27,888,750	$ 27,889	$ 5,966,430	$ -	$ -	$ (26,000)	$ (15,827)	$ (5,377,720)	$ 57

See accompanying notes to these financial statements.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

STATEMENT OF STOCKHOLDERS EQUITY

FOR THE PERIOD JANUARY 1, 2004 (INCEPTION OF DEVELOPMENT STAGE) TO

JUNE 30, 2009 (CONTINUED)

(UNAUDITED)

	Number of Shares	Common Stock	Paid-in Capital	Receivable for Issuance of Common Stock	Deferred Charges	Unrealized Loss on Securities	Accumulated Deficit	Deficit Accumulated During Development Stage	T
ICE AT IBER 5	27,888,750	$ 27,889	$ 5,966,430	$ -	$ -	$ (26,000)	$ (15,827)	$ (5,377,720)	$ 5
n stock n ent 2007 at hare	2,482,000	2,482	1,238,518	-	-	-	-	-	1,2
n stock n ent 2007 at hare	1,767,540	1,768	1,058,756	-	-	-	-	-	1,0
n stock ption ed 2007 at hare	(400,000)	(400)	(199,600)	-	-	-	-	-	(2

n stock or ervices uary alued at hare	151,785	152	106,098	-	-	-	-	-	1
n stock or ervices h 2007, at hare	1,000,000	1,000	579,000	-	-	-	-	-	5
n stock or and ent for s payable 2007, at hare	100,000	100	34,900	-	-	-	-	-	
n stock or in 2007, at hare	150,000	150	101,850	-	-	-	-	-	1
n stock or in 2007, at hare	150,000	150	134,850	-	-	-	-	-	1
n stock or in ber alued at hare	400,000	400	287,600	-	-	-	-	-	2
s or in ber ested 2007, at hare	-	-	36,370	-	-	-	-	-	
s or in	-	-	52,180	-	-	-	-	-	

2007, uring alued at hare									
s or in 007, uring alued at hare	-	-	293,476	-	-	-	-	-	2
s or in 007, uring alued at hare	-	-	140,490	-	-	-	-	-	1
s or in May ested 2007, t hare	-	-	52,946	-	-	-	-	-	
s or in 2007, uring alued at hare	-	-	61,449	-	-	-	-	-	
s or in 2007, uring alued at hare	-	-	52,292	-	-	-	-	-	
s or in er ested 2007, t hare	-	-	1,159	-	-	-	-	-	
issued ces in	-	-	17,589	-	-	-	-	-	

y 2006, uring alued at hare									
issued ces in y 2006, uring alued at hare	-	-	43,757	-	-	-	-	-	
issued ces in ber ested 2007, t hare	-	-	41,653	-	-	-	-	-	
s or ervices 2007, uring alued at hare	-	-	348,000	-	-	-	-	-	3
d for stock or ervices h 2007, t hare	-	-	-	-	(928,000)	-	-	-	(9
cation red	-	-	-	-	773,333	-	-	-	7
ed gain n es	-	-	-	-	-	(32,610)	-	-	(
for the ling ber 31,	-	-	-	-	-	-	-	(4,223,449)	(4,2
NCE AT MBER 7	33,690,075	33,690	10,449,763	-	(154,667)	(58,610)	(15,827)	(9,601,169)	6
	690,001	690	413,310	-	-	-	-	-	4

n stock n ent 2008 at hare									
n stock or in 2008, at hare	100,000	100	74,900	-	-	-	-	-	
n stock or in 2008, at hare	200,000	200	359,800	-	-	-	-	-	3
e of s at hare	320,000	320	79,680	-	-	-	-	-	
e of s at hare, t to ber justed fering	641,080	641	159,629						1
e of s at hare	270,000	270	134,730	-	-	-	-	-	1
s or in ber ested 2008, at hare	-	-	27,014	-	-	-	-	-	
s or in 2007, uring alued at hare	-	-	10,885	-	-	-	-	-	
s or in	-	-	121,713	-	-	-	-	-	1

007, uring alued at hare									
s or in 007, uring alued at hare	-	-	48,738	-	-	-	-	-	
s or in May ested 2008, at hare	-	-	31,444	-	-	-	-	-	
s or in ber ested 2008, at hare	-	-	12,487	-	-	-	-	-	
issued ces in ber ested 2008, at hare	-	-	286,803	-	-	-	-	-	2
issued ces in 2008, uring alued at hare	-	-	30,750	-	-	-	-	-	
issued ces in 08, uring alued at hare	-	-	114,519	-	-	-	-	-	1
issued ces in 2008, uring	-	-	525,263	-	-	-	-	-	5

alued at hare									
issued ces in per ested 2008, t hare	-	-	6,439	-	-	-	-	-	
s or ervices h 2008, hrough per alued at hare	-	-	332,000	-	(332,000)	-	-	-	
s or in May ested per alued at hare	-	-	976,193	-	-	-	-	-	9
ation red	-	-	-	-	431,337	-	-	-	4
ble for ance of n stock	-	-	-	(12,500)	-	-	-	-	(
d loss fication	-	-	-	-	-	58,610	-	-	
for the ding per 31,	-	-	-	-	-	-	-	(4,340,607)	(4,3
NCE AT IBER 8	35,911,156	$ 35,911	$ 14,196,060	$ (12,500)	$ (55,330)	$ -	$ (15,827)	$ (13,941,776)	$ 2

See accompanying notes to these financial statements.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

STATEMENT OF STOCKHOLDERS EQUITY

FOR THE PERIOD JANUARY 1, 2004 (INCEPTION OF DEVELOPMENT STAGE) TO

JUNE 30, 2009 (CONTINUED)

(UNAUDITED)

	Number of Shares	Common Stock	Paid-in Capital	Receivable for Issuance of Common Stock	Deferred Charges	Accumulated Deficit	Deficit Accumulated During Development Stage	Total
ALANCE AT ECEMBER 1, 2008	35,911,156	$ 35,911	$ 14,196,060	$ (12,500)	$ (55,330)	$ (15,827)	$ (13,941,776)	$ 206,53
ights to urchase shares sued in January 009, vested uring 2009, alued at 0.33/share	-	-	132,058	-	-	-	-	132,05
ommon stock sued for ervices in nuary 2009, alued at 0.58/share	100,000	100	57,900	-	-	-	-	58,00
ommon stock sued for services settlement for ccounts payable nuary 2009 alued at 0.25/share	100,000	100	24,900	-	-	-	-	25,00

xercise of urchase right greement in nuary 2009 at .25/share	180,550	181	44,957	-	-	-	-	45,13
xercise of arrants at .25/share, ursuant to ovember 2008 djusted stock ffering	1,279,336	1,279	318,555					319,83
xercise of arrants at .001/share	400,000	400	-	-	-	-	-	40
ptions issued r services in ovember 2007, ested during 009, valued at .60/share	-	-	98,798	-	-	-	-	98,79
ptions issued r services in nuary 2008, ested during 009, valued at .60/share	-	-	6,085	-	-	-	-	6,08
ptions issued r services in ly 2008, ested during 009, valued at .48/share	-	-	30,504	-	-	-	-	30,50
ptions issued r services in ugust 2008, ested during 009, valued at .36/share	-	-	298,694	-	-	-	-	298,69
ptions issued r services in ovember 2008, ested during 009, valued at .50/share	-	-	45,478	-	-	-	-	45,47
ptions issued r services in nuary 2009, ested during	-	-	13,136	-	-	-	-	13,13

009, valued at 0.53/share								
ptions issued r services in ebruary 2009, ested during 009, valued at 0.38/share	-	-	9,583	-	-	-	-	9,58
ptions issued r services in une 2009, ested during 009, valued at 0.85/share	-	-	21,085	-	-	-	-	21,08
Varrants issued r services in une 2009, ested during 009, valued at 0.85/share	-	-	71,151	-	-	-	-	71,15
ontribution of ccrued payroll February 2009	-	-	52,129	-	-	-	-	52,12
mortization of eferred charges	-	-	-	-	55,330	-	-	55,33
ayment for the suance of ommon stock	-	-	-	12,500	-	-	-	12,50
ommon stock sued for ervices in June 009, valued at 0.34/share	116,000	116	39,884	-	-	-	-	40,00
ommon stock sued for ervices & ettlement for ccounts payable une 2009 alued at 0.34/share	145,000	145	49,855					50,00
ommon stock sued in private acement uring June 009 at 0.34/share	2,479,500	2,480	852,520	-	-	-	-	855,00
	-	-	-	-	-	-	(1,435,600)	(1,435,60

et loss for the x months nding June 30, 009								
ALANCE AT une 30, 2009 UNAUDITED)	40,711,542	$ 40,712	$ 16,363,332	$ -	$ -	$ (15,827)	$ (15,377,376)	$ 1,010,84

See accompanying notes to these financial statements.

-6-

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

STATEMENTS OF CASH FLOW FOR THE SIX MONTHS ENDING

JUNE 30, 2009 AND 2008 AND

FOR THE PERIOD JANUARY 1, 2004 (INCEPTION OF DEVELOPMENT STAGE) TO

JUNE 30, 2009

(UNAUDITED)

	Cumulative Since Inception	For the Six Months Ending June 30, 2009	For the Six Months Ending June 30, 2008
CASH FLOWS FROM OPERATING ACTIVITIES			
Net loss	$ (15,377,376)	$ (1,435,600)	$ (2,486,712)
Adjustment to reconcile net loss to net cash used in operating activities			
Amortization of deferred charges	4,392,456	55,330	277,730
Warrants issued for services	2,133,587	71,151	1,213,863
Stock options issued for services	2,352,524	523,363	191,957
Common stock issued for services	1,093,292	128,000	75,000
Purchase right agreement amortization	132,058	132,058	-
Depreciation	67,243	6,348	8,427
Realized (gain) loss on investments	(3,911)	-	108
Realized gain on disposal of assets	(637)	-	-
(Increase) decrease in assets			
Receivables	(30,461)	-	(78)
Prepaid expenses	(5,331)	6,867	(62)
Increase (decrease) in liabilities			
Accounts payable	152,218	1,653	(47,730)
Accounts payable - related party	-	(7,172)	6,593
Accrued expenses	28,702	(3,988)	(16,460)

Net cash used in operating activities	(5,065,636)	(521,990)	(777,364)
CASH FLOWS FROM INVESTING ACTIVITIES			
Cost of intangibles	(215,561)	(3,145)	(10,375)
Proceeds from sale of available for sale securities	203,911	-	62
Proceeds from receipt of note receivable	100,000		-
Purchase of available for sale securities	(200,000)	-	-
Purchase of equipment	(85,371)	-	(10,207)
Net cash used in investing activities	(197,021)	(3,145)	(20,520)
CASH FLOWS FROM FINANCING ACTIVITIES			
Issuance of common stock, private placement	4,995,524	855,000	414,000
Common stock rescinded, private placement	(200,000)	-	-
Issuance of common stock, exercise of warrants	683,004	320,234	110,000
Issuance of common stock, exercise of purchase right agreement	45,138	45,138	-
Repayment of notes payable	(14,970)	-	-
Proceeds from subscription receivable	19,000	12,500	-
Advances to stockholders	(4,933)	-	-
Proceeds from convertible notes	529,000	-	-
Advances from officers	1,498	-	-
Net cash provided by financing activities	6,053,261	1,232,872	524,000
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	790,604	707,737	(273,884)
CASH AND CASH EQUIVALENTS - BEGINNING OF PERIOD	5,358	88,225	479,451
CASH AND CASH EQUIVALENTS - END OF PERIOD	$ 795,962	$ 795,962	$ 205,567

See accompanying notes to these financial statements.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

STATEMENTS OF CASH FLOW FOR THE SIX MONTHS ENDING

JUNE 30, 2009 AND 2008 AND

FOR THE PERIOD JANUARY 1, 2004 (INCEPTION OF DEVELOPMENT STAGE) TO

JUNE 30, 2009

(UNAUDITED)

	Cumulative Since Inception	For the Six Months Ending June 30, 2009	For the Six Months Ending June 30, 2008
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION			
CASH PAID DURING THE PERIOD FOR:			
Interest	$ 21,495	$ 588	$ 685
SUPPLEMENTAL DISCLOSURE OF NON-CASH INVESTING AND FINANCING ACTIVITIES			
Common stock issued in exchange for deferred charges	$ 3,142,400	$ -	$ -
Warrants issued in exchange for deferred charges	$ 1,581,056	$ -	$ 332,000
Common stock issued as settlement for accounts payable	$ 74,708	$ 45,000	$ -

Increase/(Decrease) in fair value of investment securities	$	-	$	-	$	7,951
Accrued interest contributed as capital	$	35,624	$	-	$	-
Common stock issued in the conversion of notes payable	$	529,000	$	-	$	-
Acquisition of automobile through loan payable	$	24,643	$	-	$	-
Common stock issued upon exercise of a warrant in exchange for receivable	$	75,000	$	-	$	-
Insurance company pay off of note payable	$	9,673	$	-	$	-
Receivable for issuance of common stock	$	10,000	$	10,000	$	-
Contribution of officer accrued payroll	$	52,129	$	52,129	$	-

See accompanying notes to these financial statements.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

JUNE 30, 2009 AND 2008

NOTE 1- FINANCIAL STATEMENTS

The accompanying unaudited financials statements have been prepared by Lightwave Logic, Inc. (the Company). These statements include all adjustments (consisting only of its normal recurring adjustments) which management believes necessary for a fair presentation of the statements and have been prepared on a consistent basis using the accounting polices described in the Summary of Accounting Policies included in the 2008 Annual Report. Certain financial information and footnote disclosures normally indicated in financial statements prepared in accordance with accounting principals generally accepted in the United States have been condensed or omitted pursuant to those rules and regulations, although the Company firmly believes that the accompanying disclosures are adequate to make the information presented not misleading. The financial statements should be read in conjunction with the financial statements and notes thereto included in the Company s Annual Report on Form 10-K for the year ended December 31, 2008, as filed with the Securities and Exchange Commission. The interim operating results for the three and six months ending June 30, 2009 may not be indicative of operating results expected for the full year.

Loss per Share

The company follows SFAS 128, Earnings per Share , resulting in the presentation of basic and diluted loss per share. Because the Company reported a net loss for each of the three and six months ending June 30, 2009 and 2008, common stock equivalents consisting of options and warrants were anti-dilutive; therefore, the basic and diluted net loss per share for each of these periods was the same.

Reclassifications

Certain reclassifications have been made to the June 30, 2008 financial statements to conform to the June 30, 2009 presentation. The most significant is the non-cash cost of a consulting agreement in conjunction with the warrants purchase agreement valued at $976,193 issued during the second quarter of 2008. The expense was reclassified from research and development to general and administrative expense due to a change in allocation methodology.

Recently Adopted Accounting Pronouncements

In May 2008, the FASB issued FSP APB 14-1, Accounting for Convertible Debt Instruments That May Be Settled in Cash upon Conversion (Including Partial Cash Settlement), which clarifies the accounting for convertible debt instruments that may be settled in cash upon conversion, including partial cash settlement. FSP APB 14-1 specifies that an issuer of such instruments should separately account for the liability and equity components of the instruments in a manner that reflects the issuer s non-convertible debt borrowing rate when interest costs are recognized in subsequent periods. FSP APB 14-1 is effective for the Company s fiscal year beginning January 1, 2009, and retrospective application is required for all periods presented.

FSP APB 14-1 is currently not applicable to the Company.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

JUNE 30, 2009 AND 2008

NOTE 1- FINANCIAL STATEMENTS (CONTINUED)

Recently Adopted Accounting Pronouncements (Continued)

In June 2008, the FASB issued EITF Issue No. 07-5, Determining Whether an Instrument (or Embedded Feature) is Indexed to an Entity s Own Stock (EITF Issue No. 07-5), which is effective for financial statements for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years. The Issue addresses the determination of whether an instrument (or an embedded feature) is indexed to an entity s own stock, which is the first part of the scope exception in Paragraph 11(a) of SFAS No. 133 for the purpose of determining whether the instrument is classified as an equity instrument or accounted for as a derivative instrument which would be recognized either as an asset or liability and measured at fair value. The guidance shall be applied to outstanding instruments as of the beginning of the fiscal year in which this Issue is initially applied. Any debt discount that was recognized when the conversion option was initially bifurcated from the convertible debt instrument shall continue to be amortized. The cumulative effect of the change in accounting principles shall be recognized as an adjustment to the opening balance of retained earnings. The adoption of EITF Issue No. 07-5 did not have a material impact on the Company s financial statements.

In June 2008, the FASB issued FASB Staff Position (FSP) Emerging Issues Task Force (EITF) 03-6-1, Determining Whether Instruments Granted in Share-Based Payment Transactions Are Participating Securities. FSP EITF 03-6-1 addresses whether instruments granted in share-based payment transactions are participating securities prior to vesting and, therefore, need to be included in the earnings allocation in computing earnings per share under the two-class method as described in SFAS No. 128, Earnings Per Share. Under the guidance of FSP EITF 03-6-1, unvested share-based payment awards that contain non-forfeitable rights to dividends or dividend equivalents (whether paid or unpaid) are participating securities and must be included in the computation of earnings per share pursuant to the two-class method. All prior period earnings per share information must be adjusted retrospectively. The Company adopted FSP EITF 03-6-1 as of January 1, 2009. The Company does not currently have any share-based awards that would qualify as participating securities.

In September 2006, the FASB issued SFAS No. 157, Fair Value Measurements. SFAS No. 157 establishes a framework for measuring fair value and expands disclosures about fair value measurements. The changes to current practice resulting from the application of this statement relate to the definition of fair value, the methods used to measure fair value, and the expanded disclosures about fair value measurements. SFAS No. 157 is effective for fiscal years beginning after November 15, 2007. In February 2008, the FASB issued FSP No. SFAS No. 157-2, Effective Date of FASB Statement No. 157, which provides a one-year deferral of the effective date of SFAS No. 157 for nonfinancial assets and nonfinancial liabilities, except those that are recognized or disclosed in the financial statements at fair value at least annually. The Company adopted this statement for financial assets and financial liabilities and nonfinancial assets and nonfinancial liabilities disclosed or recognized at fair value on a recurring basis (at least annually) as of January 1, 2008. The Company adopted the statement for nonfinancial assets and nonfinancial liabilities on January 1, 2009. The adoption of this statement in each period did not have a material impact on its financial statements.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

JUNE 30, 2009 AND 2008

NOTE 1- FINANCIAL STATEMENTS (CONTINUED)

Recently Adopted Accounting Pronouncements (Continued)

FSA 142-3 Determination of the Useful Life of Intangible Assets

In April 2008, the FASB issued FASB Staff Position (FSP) FAS 142-3, Determination of the Useful Life of Intangible Assets, which amends the factors that should be considered in developing renewal or extension assumptions used to determine the useful life of a recognized intangible asset under FASB Statement No. 142, Goodwill and Other Intangible Assets. This Staff Position is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years. The adoption of FSA 142-3 did not have a material impact on the Company s financial statements.

In April 2009, the FASB issued FASB Staff Position No. 107-1 (FSP FAS 107-1) and APB 28-1 (APB 28-1), which amends FASB Statement No. 107, Disclosures about Fair Value of Financial Instruments and APB Opinion No. 28, Interim Financial Reporting, to require disclosures about the fair value of financial instruments for interim reporting periods. FSP FAS 107-1 and APB 28-1 is effective for interim reporting periods ending after June 15, 2009. The adoption of this staff position did not have a material impact on the Company s financial statements.

In April 2009, the FASB issued FASB Staff Position No. 157-4 (FSP FAS 157-4), which provides additional guidance in accordance with FASB No. 157, Fair Value Measurements, when the volume and level of activity for the asset or liability has significantly decreased. FSP FAS 157-4 is effective for interim and annual reporting periods ending after June 15, 2009. The adoption of this staff position did not have a material effect on its financial statements.

In April 2009, the FASB issued FASB Staff Position No. 115-2 (FSP FAS 115-2) and FASB Staff Position No. 124-2 (FSP FAS 124-2), which amends the other-than-temporary impairment guidance for debt and equity securities. FSP FAS 115-2 and FSP FAS 124-2 is effective for interim and annual reporting periods ending after June 15, 2009. The staff position does not apply to the Company since it does not currently have any investments in debt and equity securities.

In May 2009, the FASB issued SFAS No. 165, Subsequent Events, which is effective for interim or annual financial periods ending after June 15, 2009. SFAS No. 165 establishes general standards of accounting and disclosure of events that occur after the balance sheet but before financial statements are issued or are available to be issued. However, since the Company is a public entity, management is required to evaluate subsequent events through the date that financial statements are issued and disclose the date through which subsequent events have been evaluated, as well as the date the financial statements were issued. SFAS No. 165 was adopted for its interim period ending June 30, 2009. Subsequent events have been evaluated through August 13, 2009, the date the financial statements were issued as further discussed in EITF Topic No. D-86.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

JUNE 30, 2009 AND 2008

NOTE 1- FINANCIAL STATEMENTS (CONTINUED)

Recently Issued Accounting Pronouncements Not Yet Adopted

In June 2009, the FASB issued SFAS No. 168, The FASB Accounting Standards Codification, which establishes the Codification as the source of authoritative GAAP recognized by the FASB to be applied by nongovernmental entities. SFAS 168 is effective for financial statements issued for interim and annual periods ending after September 15, 2009. The adoption of SFAS 168 is not expected to have an effect on the Company s financial reporting.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

JUNE 30, 2009 AND 2008

NOTE 2 GOING CONCERN

The accompanying financial statements have been prepared assuming the Company will continue as a going concern. The Company has incurred significant losses and experienced negative cash flow during the development stage. These conditions raise substantial doubt about the Company s ability to continue as a going concern. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

The Company is in the development stage at June 30, 2009. Currently, the Company should have funds to maintain its operations through January 2010. Currently, outstanding warrants if exercised before their expiration should supply the necessary funds to maintain its operations through October 2010. The Company s development has run behind schedule however, management hopes to complete a prototype modulator by the end of third quarter of 2009. Management is in the process of developing a business plan that it believes will be attractive enough to investors to raise the necessary capital. However, there can be no assurances that the Company will be able to secure the necessary financing and/or equity investment or achieve an adequate sales level. Successful completion of the Company s prototype could lead to adequate financing to fulfill its development activities and achieve a level of revenue adequate to support the Company s business plan for the foreseeable future.

NOTE 3 DEFERRED CHARGES

Deferred charges represent the unamortized fair value of the issuance of common stock and warrants for future services to non-employees which was accounted for in accordance with Emerging Issue Task Force No. 96-18, Accounting for Equity Instruments That Are Issued To Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services, as follows with the deferred charge fully amortized at June 30, 2009:

		June 30, 2009		December 31, 2008
Common stock	$	2,811,400	$	2,811,400
Warrants		1,581,056		1,581,056
		4,392,456		4,392,456
Less: Accumulated Amortization		4,392,456		4,337,126
		-		55,330
Less: Amount reflected as a contra-equity account for management consulting services provided by related party		-		55,330
	$	-	$	-

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

JUNE 30, 2009 AND 2008

NOTE 4 EQUIPMENT

Equipment consists of the following:

		June 30, 2009		December 31, 2008
Office equipment	$	7,727	$	7,727
Lab equipment		82,105		82,105
		89,832		89,832
Less: Accumulated depreciation		34,454		28,106
	$	55,378	$	61,726

Depreciation expense for the six months ending June 30, 2009 and 2008 was $6,348 and $8,427.

NOTE 5 INTANGIBLE ASSETS

This represents legal fees and patent fees associated with the registration of patents. The Company has not recorded any amortization expenses since the patents have yet to be declared effective. Once issued, the cost of the patents will be amortized over their legal lives, which is generally 20 years.

NOTE 6 INCOME TAXES

There is no income tax benefit for the losses for the six months ended June 30, 2009 and 2008 since management has determined that the realization of the net deferred tax asset is not assured and has created a valuation allowance for the entire amount of such benefits.

The Company s policy is to record interest and penalties associated with unrecognized tax benefits as additional income taxes in the statement of operations. As of January 1, 2009, the Company had no unrecognized tax benefits, or any tax related interest of penalties. There were no changes in the Company s unrecognized tax benefits during the period ended June 30, 2009. The Company did not recognize any interest or penalties during 2009 related to unrecognized tax benefits. Tax years from 2005 through 2008 remain subject to examination by major tax jurisdictions.

NOTE 7 STOCKHOLDERS EQUITY

Preferred Stock

Pursuant to our Company s Articles of Incorporation, our board of directors is empowered, without stockholder approval, to issue series of preferred stock with any designations, rights and preferences as they may from time to time determine. The rights and preferences of this preferred stock may be superior to the rights and preferences of our common stock; consequently, preferred stock, if issued could have dividend, liquidation, conversion, voting or other rights that could adversely affect the voting power or other rights of the common stock. Additionally, preferred stock, if issued, could be utilized, under special circumstances, as a method of discouraging, delaying or preventing a change in control of our business or a takeover from a third party.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

JUNE 30, 2009 AND 2008

NOTE 7 STOCKHOLDERS EQUITY (CONTINUED)

Common Stock and Warrants

The stockholders deficit at January 1, 2004 has been retroactively restated for the equivalent number of shares received in the reverse acquisition at July 14, 2004 (Note 1) after giving effect to the difference in par value with the offset to additional paid-in-capital.

In July 2004, the Company issued to related parties 1,600,000 shares of its common stock for professional services valued at $256,000, fair value.

In August 2004, the Company issued 637,500 shares of its common stock for professional services to related parties valued at $75,000, fair value.

In December 2004, the Company converted a note payable of $30,000 into 187,500 shares of common stock at a conversion price of $0.16 per share.

In April 2005, the Company issued 4,000,000 shares of its common stock in a private placement for proceeds of $1,000,000.

On May 4, 2005, the Company converted the notes payable of $499,000 into 3,118,750 shares of common stock at a conversion price of $0.16 per share. An unpaid note payable in the amount of $6,500 has been reflected as a subscription receivable. During 2006, the Company deemed this $6,500 outstanding subscription receivable to be uncollectible.

During August 2005, the Company issued 210,000 shares of common stock for professional services rendered valued at $585,500, fair value. Consulting expense of $375,500 was recognized during 2005, and at December 31, 2005, the remaining balance of $210,000 is reflected as a deferred charge on the balance sheet. During 2006, consulting expense of $210,000 was recognized. This agreement ended in May 2006.

In August 2005, in conjunction with a management services contract with a related party, the Company issued 200,000 shares of common stock valued at $584,000. Management expense of $265,455 was recognized during 2005, and at December 31, 2005, the remaining balance of $318,545 is reflected as a deferred charge in a contra-equity account. During 2006, management expense of $318,545 was recognized. This agreement ended in June 2006.

During May 2005, the Company issued Stock Purchase Warrants to purchase 100,000 shares of common stock at an exercise price of $2.10 in exchange for consulting services. The warrants are exercisable until May 2008 and vest as follows: 50,000 shares during the first year of the agreement, 25,000 shares during the second year of the agreement, and 25,000 shares during the third year. In accordance with the fair value method, the Company used the Black-Scholes model to calculate the grant-date fair value, with the following assumptions: no dividend yield, expected volatility of 60%, risk-free interest rate of 3.8% and expected life of option of three years. The fair market value of the warrants was $113,250. In accordance with the fair value method as described in accounting requirements of SFAS No. 123, the Company recognized consulting expense of $37,000 in 2005. This warrant was cancelled during 2006.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

JUNE 30, 2009 AND 2008

NOTE 7 STOCKHOLDERS EQUITY (CONTINUED)

Common Stock and Warrants (Continued)

During September 2005, the Company issued Stock Purchase Warrants to purchase 100,000 shares of common stock at an exercise price of $2.00 in exchange for consulting services. The warrants expire in September 2008 and vest as follows: 50,000 shares during the first year of the agreement, 25,000 shares during the second year of the agreement, and 25,000 shares during the third year of the agreement. In accordance with the fair value method, the Company used the Black-Scholes model to calculate the grant-date fair value, with the following assumptions: no dividend yield, expected volatility of 60%, risk-free interest rate of 3.8% and expected life of option of three years. The fair market value of the warrants was $145,100. The Company recognized consulting expense of $27,014, $36,370, $66,500 and $24,200 for the years ended December 31, 2008, 2007, 2006 and 2005 in conjunction with this agreement. These warrants expired in September 2008.

On October 15, 2005, the Company issued Stock Purchase Warrants to purchase 30,000 shares of common stock at an exercise price of $1.40 in exchange for consulting services. The warrants expire in October 2006 and are exercisable immediately. In accordance with the fair value method, the Company used the Black-Scholes model to calculate the grant-date fair value, with the following assumptions: no dividend yield, expected volatility of 60%, risk-free interest rate of 4.15% and expected life of option of one year. The fair market value of the warrants was $15,900. In accordance with the fair value method as described in accounting requirements of SFAS No. 123, the Company recognized consulting expense of $15,900 during 2005. These warrants expired in October 2006.

In December 2005, in conjunction with a consulting contract, the Company issued Stock Purchase Warrants to purchase 300,000 shares of common stock at an exercise price of $0.25 per share valued at $435,060, fair value. The warrants expire in December 2007 and were exercisable immediately. In accordance with the fair value method, the Company used the Black-Scholes model to calculate the grant-date fair value, with the following assumptions: no dividend yield, expected volatility of 60%, risk-free interest rate of 4.41% and expected life of option of two years. In accordance with the fair value method as described in accounting requirements of SFAS No. 123, the Company recognized consulting expense of $199,435, and at December 31, 2005, the remaining balance in deferred charges amounted to $235,625. The 300,000 warrants were fully exercised on December 31, 2005 for $75,000. The Company recognized $18,128 and $217,497 in consulting expense in conjunction with this agreement for the years ended December 31, 2007 and 2006, which was cancelled during 2007.

During 2006, the Company issued 850,000 shares of common stock and warrants to purchase 425,000 shares of common stock for proceeds of $425,000 in accordance to a private placement memorandum amended December 18, 2006. Pursuant to the terms of the amended offering, up to 20 units were offered at the offering price of $50,000 per unit, with each unit comprise of 100,000 shares and a warrant to purchase 50,000 shares of common stock at $0.50 per share. In November 2007, 400,000 shares of common stock and warrants to purchase 200,000 shares of common stock were rescinded. As of December 31, 2008, warrants to purchase 210,000 shares of common stock were fully exercised for proceeds of $105,000, and warrants to purchase 15,000 shares expired.

During February 2006, the Company issued 300,000 shares of common stock for professional services rendered valued at $270,000, fair value. The Company recognized consulting expense of $16,875 and $118,125 and legal expense of $16,875 and $118,125 during 2007 and 2006. The contracts expired during 2007. The legal services were provided by a related party.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

JUNE 30, 2009 AND 2008

NOTE 7 STOCKHOLDERS EQUITY (CONTINUED)

Common Stock and Warrants (Continued)

During May 2006, the Company issued 400,000 shares of common stock for professional services rendered valued at $620,000, fair value. The Company recognized consulting expense of $258,333 and $361,667 during 2007 and 2006, and at December 31, 2006. The contracts expired during 2007.

During June 2006, the Company issued 25,000 shares of common stock to a related party for professional services rendered valued at $36,250, fair value. The Company recognized legal expense of $16,615 and $19,635 during 2007 and 2006, and at December 31, 2006. The contracts expired during 2007.

During November 2006, the Company issued 60,000 shares of common stock for professional services valued at $29,400, fair value. The Company recognized investor relations expense of $25,480 and $3,920 during 2007 and 2006. The contract expired during 2007.

In June 2006, in conjunction with an addendum to an existing consulting contract effective December 2005, the Company issued Stock Purchase Warrants to purchase 300,000 shares of common stock at an exercise price of $0.25 per share. The warrants expire in June 2008 and were exercisable immediately. In accordance with the fair value method, the Company used the Black-Scholes model to calculate the grant-date fair value, with the following assumptions: no dividend yield, expected volatility of 186%, risk-free interest rate of 4.41% and expected life of option of two years. The fair market value of the warrants was $465,996. During 2007 and 2006, the Company recognized consulting expense of $330,948 and $135,048 in conjunction with this agreement. The contract was cancelled during 2007. The 300,000 warrants were fully exercised on March 12, 2008 for proceeds of $75,000.

During 2006, the Company cancelled a warrant issued during May 2005 to purchase 100,000 shares of the Company s common stock at an exercise price of $2.10, and issued an option to purchase 500,000 shares of the Company s common stock at an exercise price of $1 per share and the same option s expiration and vesting terms were modified during November 2006. This option expired in June 2007. The incremental cost of the modified option was $394,030 and will be expensed over the vesting terms. The Company recognized $17,589 and $406,215 as a consulting expense in 2007 and 2006, which includes $337,290 of the incremental cost of the modified option.

During February 2006, the Company awarded an employee with an option to purchase 200,000 shares of common stock at an exercise price of $1.00 per share under the 2005 Employee Stock Option Plan. These options were valued at $217,628 using the Black-Scholes Option Pricing Formula. The employee compensation expense recognized during 2007 and 2006 is $43,757 and $22,673. In June 2007, the employee was terminated and the vesting ceased. After September 2007, the vested options expired.

During 2006, the Company recognized contributed capital of $35,624 related to the conversion of accrued interest payable.

During 2006, the Company deemed a May 2005 outstanding subscription receivable of $6,500 to be uncollectible.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

JUNE 30, 2009 AND 2008

NOTE 7 STOCKHOLDERS EQUITY (CONTINUED)

Common Stock and Warrants (Continued)

During 2007, the Company issued 2,482,000 shares of common stock and warrants to purchase 1,241,000 shares of common stock for proceeds of $1,241,000 in accordance to a private placement memorandum amended December 18, 2006. Pursuant to the terms of the amended offering, up to 20 units were offered at the offering price of $50,000 per unit, with each unit comprised of 100,000 shares and a warrant to purchase 50,000 shares of common stock at $0.50 per share. For the six month ending June 30, 2009, the remaining 600,000 outstanding warrants expired.

During 2007, the Company issued 1,767,540 shares of common stock and warrants to purchase 883,770 shares of common stock for proceeds of $1,060,524 in accordance to a private placement memorandum issued on October 3, 2007. Pursuant to the terms of the offering, up to 20 units were offered at the purchase price of $60,000 per unit, with each unit comprised of 100,000 shares and a warrant to purchase 50,000 shares of common stock at $1.00 per share. As of June 30, 2009, warrants to purchase 740,001 shares of common stock are still outstanding.

During 2007, as previously described, a shareholder that was issued 400,000 shares of the Company s common stock and a warrant to purchase 200,000 shares of common stock at $0.50 per share rescinded his shares and warrant.

During February 2007, the Company issued 151,785 shares of common stock for investor relations services valued at $106,250, fair value, which was recorded as a deferred charge and amortized over one year, the term of the services contract. During 2007, the Company recognized $97,396 in investor relations expense. During 2008, the Company recognized $8,854 in investor relations expense. This contract expired in February 2008.

During February 2007, the Company terminated its then CEO. The option to purchase 56,000 shares of common stock that was recorded as deferred charges of $42,730 were not vested and were forfeited. The option to purchase 444,000 shares of common stock that were vested expired during 2007.

During March 2007, the Company issued 1,000,000 shares of common stock to a related party for management consulting services valued at $580,000, fair value. During April 2007, the Company issued 500,000 warrants as an addendum to the original contract for management consulting services valued at $348,000, fair value. This contract was recorded as a contra-equity deferred charges account and is amortized over one year, the term of the contract. Management consulting expense recognized during 2008 and 2007 is $154,667 and $773,333. This contract was renewed in March, 2008. The warrant is still outstanding as of June 30, 2009.

During April 2007, the Company issued 100,000 shares of common stock for legal services to a related party valued at $35,000, fair value, to settle $29,708 of accounts payable and as payment for $5,292 of legal services incurred in April 2007.

During October 2007, the Company issued 150,000 shares of common stock for investor relations services valued at $102,000, fair value to a related party. During 2007 the Company recognized $102,000 in investor relation expense.

During October 2007, the Company issued 150,000 shares of common stock for investor relations services valued at $135,000, fair value. During 2007, the Company recognized $135,000 in investor relations expense.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

JUNE 30, 2009 AND 2008

NOTE 7 STOCKHOLDERS EQUITY (CONTINUED)

Common Stock and Warrants (Continued)

During November 2007, the Company issued 400,000 shares of common stock under the 2007 Stock Option Plan to the acting Chief Executive Officer for services rendered valued at $288,000, fair value. The Company recognized $288,000 in consulting expense during 2007.

During March 2007, the Company issued a warrant to purchase 100,000 shares of common stock for consulting services at an exercise price of $0.25 per share. The warrant was valued at $63,065 using the Black-Scholes Option Pricing Formula and expensed over the life of the contract associated with the consulting services, which is one year. The consulting expense recognized during 2008 and 2007 is $10,885 and $52,180. The warrant is still outstanding as of June 30, 2009.

During April 2007, the Company issued warrants to purchase 900,000 shares of common stock for consulting services at an exercise price of $0.25 per share. The warrants were valued at $604,416 using the Black-Scholes Option Pricing Formula and expensed over the life of the contracts associated with the consulting services, which is one year. The consulting expense recognized during 2008 and 2007 is $170,451 and $433,966. The warrant is still outstanding as of June 30, 2009.

During May 2007, the Company issued a warrant to purchase 150,000 shares of common stock for consulting services at an exercise price of $0.25 per share. The warrant was valued at $84,390 using the Black-Scholes Option Pricing Formula and expensed over the life of the contract associated with the consulting services, which is one year. The consulting expense recognized during 2008 and 2007 is $31,444 and $52,946. The warrant is still outstanding as of June 30, 2009.

During October 2007, the Company issued a warrant to purchase 100,000 shares of common stock at a purchase price of $0.25 per share for accounting services rendered. The warrant was valued at $61,449 using the Black-Scholes Option Pricing Formula. The Company recognized $61,449 in accounting expense during 2007. The warrant is still outstanding as of June 30, 2009.

During October 2007, the Company issued a warrant to purchase 67,200 shares of common stock at a purchase price of $0.25 per share for consulting services rendered. The warrant was valued at $52,292 using the Black-Scholes Option Pricing Formula. During 2007, the Company recognized $52,292 in consulting expense. In July 2008, the warrant was partially exercised to purchase 20,000 shares of common stock for proceeds of $5,000. As of June 30, 2009, warrants to purchase 47,200 shares of common stock are still outstanding.

During December 2007, the Company issued a warrant to purchase 25,000 shares of common stock at a purchase price of $0.50 per share for accounting services rendered. The warrant was valued at $13,646 using the Black-Scholes Option Pricing Formula and expensed over the life of the contract, which is one year. The Company recognized $12,487 and $1,159 in consulting expense during 2008 and 2007. The warrant is still outstanding as of June 30, 2009.

During November 2007, under the 2007 Employee Stock Option Plan, the Company issued options to purchase 1,752,000 shares of common stock at a purchase price of $0.72 per share. The options were valued at $1,045,077 using the Black-Scholes Option Pricing Formula. During 2008, an option to purchase 750,000 shares of common stock, of which 125,000 shares were vested, forfeited. The consulting expense recognized during 2008 and 2007 is $286,803 and $41,653. For the six month ending June 30, 2009, the Company recognized $98,798 of expense. The options are still outstanding as of June 30, 2009.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

JUNE 30, 2009 AND 2008

NOTE 7 STOCKHOLDERS EQUITY (CONTINUED)

Common Stock and Warrants (Continued)

In January 2008, under the 2007 Employee Stock Option Plan, the Company issued an option to purchase 100,000 shares of common stock at a purchase price of $0.72 per share. The option was valued at $59,490, fair value, using the Black-Scholes Option Pricing Formula and is being recognized based on vesting terms over a three year period. The expense recognized during 2008 is $30,750. For the six month ending June 30, 2009, the Company recognized $6,085 of expense. The options are still outstanding as of June 30, 2009.

During 2008, the Company issued 690,001 shares of common stock and warrants to purchase 345,001 shares of common stock for proceeds of $414,000 in accordance to a private placement memorandum issued on October 3, 2007. Pursuant to the terms of the offerings, up to 25 units were offered at the purchase price of $60,000 per unit, with each unit comprised of 100,000 shares and a warrant to purchase 50,000 shares of common stock at $1.00 per share. As of June 30, 2009, warrants to purchase 299,167 shares of common stock are still outstanding.

During March 2008, the Company issued a warrant to purchase 400,000 shares of common stock as an addendum to the original contract for management consulting services provided by a related party, valued at $332,000, fair value using Black-Scholes Option Pricing Formula, vesting immediately. This contract was recorded as a contra-equity deferred charges account and is amortized over one year beginning February 28, 2008, the term of the contract. Management consulting expense recognized during 2008 is $276,670. For the six month ending June 30, 2009, the Company recognized $55,330 of management consulting expense. In January 2009, the warrant was fully exercised to purchase 400,000 shares of common stock for proceeds of $400.

During March 2008, the company issued 100,000 shares of common stock for legal services to a related party valued at $75,000, fair value. The Company recognized $75,000 of legal expense for the year ending December 31, 2008.

During April 2008, the Company issued a warrant to purchase 600,000 shares of common stock at a purchase price of $0.73 per share for consulting services rendered. The warrant was valued at $976,193, fair value, using the Black-Scholes Option Pricing Formula, vesting immediately. For the year ended December 31, 2008, the Company recognized $976,193 in consulting expense. The warrant is still outstanding as of June 30, 2009.

In July 2008, the Company issued options to purchase 200,000 shares of common stock at a purchase price of $1.75 per share to members of the board of directors, under the 2007 Employee Stock Option Plan. Using the Black-Scholes Option Pricing Formula, the options were valued at $296,247, fair value, vesting 50,000 immediately and the remaining in annual equal installments of 50,000 over the next three years. The expense is being recognized based on vesting terms over a three year period. The expense recognized during 2008 is $114,519. For the six month ending June 30, 2009, the Company recognized $30,504 of expense. The options are still outstanding as of June 30, 2009.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

JUNE 30, 2009 AND 2008

NOTE 7 STOCKHOLDERS EQUITY (CONTINUED)

Common Stock and Warrants (Continued)

In August 2008, under the 2007 Employee Stock Option Plan, the Company issued options to purchase 550,000 and 1,050,000 shares of common stock at a purchase price of $1.42 and $1.75 per share to members of the board of directors and the Chief Executive Officer, vesting 212,500 immediately and the remaining in annual equal installments of 112,500 over the next three years and vesting in quarterly equal installments of 87,500 commencing November 1, 2008, respectively. The options were valued at $2,176,201, fair value, using the Black-Scholes Option Pricing Formula and are being recognized based on vesting terms over a three year period. The expense recognized during 2008 is $525,263. For the six month ending June 30, 2009, the Company recognized $298,694 of expense. The options are still outstanding as of June 30, 2009.

In August 2008, the Company issued 200,000 shares of common stock under the 2007 Stock Option Plan to its new Chief Executive Officer as part of the employment agreement valued at $360,000, fair value. The Company recognized $360,000 in consulting expense for the year ending December 31, 2008.

In 2008, January through August warrant holders exercised warrants to purchase 270,000 shares at $0.50 per share for proceeds of $135,000.

On October 28, 2008, the Company s board of directors authorized the Company to raise up to $600,000 of capital through an Adjusted Common Stock Offering to certain warrant holders. This offering provided eligible warrant holders with the opportunity to purchase four (4) shares of common stock for each dollar invested pursuant to their existing warrant agreement. As of December 31, 2008, warrants to purchase 641,080 shares of common stock were exercised with proceeds of $160,270. For the three month period ending March 31, 2009, warrants to purchase 1,279,336 shares of common stock were exercised with proceeds of $319,834. In January 2009, the term of the 2008 Adjusted Common Stock offering was extended until January 31, 2009.

In November 2008, the Company issued an option to purchase 250,000 shares of common stock under the 2007 Stock Option Plan at a purchase price of $.65 per share to a new member of its board of directors. Using the Black-Scholes Option Pricing Formula, the options were valued at $125,911, fair value, vesting 62,500 immediately and the remaining in annual equal installments of 62,500 over the next three years. The expense is being recognized based on vesting terms over a three year period. The expense recognized during 2008 is $6,439. For the six month ending June 30, 2009, the Company recognized $45,478 of expense. The options are still outstanding as of June 30, 2009.

In January 2009, an employee was granted with an option to purchase up to 25,000 shares of common stock. Using the Black-Scholes Option Pricing Formula, the options were valued at valued at $13,136, fair value. These options expire in 5 years and vest immediately. The Company recognized expense of $13,136 for the six month ending June 30, 2009. The options are still outstanding as of June 30, 2009.

During January 2009, the Company issued 100,000 shares of common stock to an officer, under the 2007 Stock Option Plan, for services rendered valued at $58,000, fair value.

During January 2009, the Company issued 100,000 shares of common stock for legal services to a related party valued at $25,000, to settle accounts payable for $10,000 and $15,000 for legal services.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

JUNE 30, 2009 AND 2008

NOTE 7 STOCKHOLDERS EQUITY (CONTINUED)

Common Stock and Warrants (Continued)

During January 2009, the officers, directors, and employees of the Company were each given the right to purchase from the Company s 2007 Employee Stock Plan up to 40,000 shares of common stock at a purchase price of $.25 per share, 400,000 shares in the aggregate, all of which were valued at $132,058, fair value using the Black-Scholes Option Pricing Formula. The rights to purchase vested immediately. A total of 180,550 shares were purchased pursuant to the rights to purchase with total proceeds of $35,138 and a common stock receivable of $10,000 which was paid in May, 2009. The rights to purchase the remaining 219,450 shares expired on January 31, 2009.

At December 31, 2008 the Company had accrued officer salaries and payroll taxes of $98,205. On February 19, 2009, two officers, who are also shareholders, agreed to waive their rights to unpaid wages and salary amounting to $52,129. Accordingly in the first quarter 2009, the accrued expense was adjusted from $98,205 to $42,088 with the $52,129 treated as contributed capital and $3,988 reversed from payroll taxes.

In February 2009, an employee was granted with an option to purchase up to 25,000 shares of common stock. Using the Black-Scholes Option Pricing Formula, the options were valued at valued at $9,583, fair value. These options expire in 5 years and vest immediately. The Company recognized expense of $9,583 for the six month ending June 30, 2009. The options are still outstanding as of June 30, 2009.

During June 2009, in accordance to private placement memorandum, the Company issued 2,479,500 shares of common stock for proceeds of $855,000 dated June 10, 2009. Pursuant to the terms of the offering, up to 18 units were offered at the offering price of $50,000 per unit, with each unit comprised of 145,000 shares to purchase at $0.34 per share.

During June 2009, the Company issued a warrant to purchase 464,000 shares of common stock at a purchase price of $0.34 per share for accounting services rendered. The warrant was valued at $391,342 using the Black-Scholes Option Pricing Formula, vesting 46,400 immediately and the remaining on equal monthly installments of 23,200 over the next eighteen months. The expense is being recognized based on service terms of the agreement over a twenty two month period. For the six month ending June 30, 2009, the Company recognized $71,151 of expense. The warrant is still outstanding as of June 30, 2009.

In June 2009, an employee was granted with an option to purchase up to 25,000 shares of common stock at a purchase price of $.34 per share. Using the Black-Scholes Option Pricing Formula, the options were valued at valued at $21,085, fair value. These options expire in 5 years and vest immediately. The Company recognized expense of $21,085 for the six months ending June 30, 2009. The warrant is still outstanding as of June 30, 2009.

During June 2009, the Company issued 145,000 shares of common stock for legal services to a related party valued at $50,000, to settle accounts payable for $35,000 and $15,000 for legal services.

During June 2009, the Company issued 116,000 shares of common stock for accounting services valued at $40,000, fair value. The Company recognized $40,000 of accounting expense for the six month period ending June 30, 2009.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

JUNE 30, 2009 AND 2008

NOTE 8 STOCK BASED COMPENSATION

The Company uses the Black-Scholes option pricing model to calculate the grant-date fair value of an award, with the following assumptions for 2009 and 2008: no dividend yield in both years, expected volatility between 127% and 141% in 2009 and between 113% and 186% in 2008, risk-free interest rate between 0.03% and 2.81% in 2009 and between 0.03% and 5.1% in 2008 and expected option life of one month to five years in 2009 and 2008.

As of June 30, 2009, there was $2,195,607 of unrecognized compensation expense related to non-vested market-based share awards that is expected to be recognized through November 2011.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

JUNE 30, 2009 AND 2008

NOTE 8 STOCK BASED COMPENSATION (CONTINUED)

The following tables summarize all stock option and warrant activity of the Company since December 31, 2004:

	Non-Qualified Stock Options and Warrants Outstanding and Exercisable		
	Number of Shares	Exercise Price	Weighted Average Exercise Price
Outstanding, December 31, 2004	-	$ -	$ -
Granted	680,000	$0.25 - $2.10	$ 0.99
Exercised	(300,000)	$ 0.25	$ 0.25
Outstanding, December 31, 2005	380,000	$1.40 - $2.10	$ 0.68
Granted	1,425,000	$0.25 - $1.00	$ 0.70
Cancelled	(260,000)	$1.40 - $2.10	$ (0.48)
Expired	(70,000)	$1.40 - $2.00	$ (0.12)
Outstanding, December 31, 2006	1,475,000	$0.25 - $2.00	$ 0.83
Granted	5,768,971	$0.25 - $0.72	$ 0.48
Rescinded	(200,000)	$ 0.50	$ 0.50
Forfeited	(125,019)	$ 1.00	$ 1.00

Expired	(574,981)	$ 1.00	$ 1.00
Outstanding, December 31, 2007	6,343,971	$0.25 - $2.00	$ 0.48
Granted	3,495,001	$0.001 - $1.75	$ 1.16
Expired	(115,000)	$0.50 - $2.00	$ 0.07
Forfeited	(750,000)	$ 0.72	$ 0.72
Exercised	(807,770)	$0.25 - $0.50	$ 0.53
Outstanding, December 31, 2008	8,166,202	$0.001 - $1.75	$ 0.79
Granted	939,000	$0.25 - $0.45	$ 0.30
Expired	(819,450)	$0.25 - $0.50	$ 0.43
Forfeited			
Exercised	(1,133,384)	$0.001 - $0.25	$ 0.20
Outstanding, June 30, 2009	7,152,368	$0.25 - $1.75	$ 0.85
Exercisable, June 30, 2009	4,721,268	$0.25 - $1.75	$ 0.69

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

JUNE 30, 2009 AND 2008

Non-Qualified Stock Options and Warrants Outstanding

Range of Exercise Prices	Number Outstanding Currently Exercisable at June 30, 2009	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price of Options and Warrants Currently Exercisable
$0.25 - $1.75	4,721,268	2.84 Years	$ 0.69

NOTE 9 CONTINGENCY

2005 Private Offering

During 2005, the Company raised $1,000,000 through the sale of 4,000,000 shares of common stock in a limited offering to persons believed to be accredited investors. The Company received a legal opinion from third party outside counsel as to the availability of an exemption from registration with the SEC with respect to the limited offering. In December 2005, the Company was informed by the SEC that it is investigating the circumstances surrounding the $1,000,000 offering including the subsequent public resale of certain shares originally sold in the offering, along with related matters. The Company has further been informed that the original issuance of the stock and subsequent resale may have been done, in the opinion of the SEC, in violation of the registration provisions of the Securities Act of 1933, as amended. These matters could lead to enforcement action by the SEC.

In or around January 2007, the SEC issued an investigative subpoena to the Company directing it to produce specified documents and information. Thereafter, an SEC subpoena seeking testimony by the Company s president was issued. The Company and its president have complied with all of the SEC s requests for documents and testimony. The SEC has not indicated whether or not it intends to take any action against the Company or any of its officers, directors or employees. There has been no communications with the SEC regarding this matter since December 2007.

Ronald R. Genova Lawsuit

During July 2007, Ronald R. Genova (plaintiff) filed a lawsuit in Philadelphia County, Court of Common Pleas against Defendants Lightwave Logic, Inc., (formerly Third-Order Nanotechnologies, Inc.), PSI-TEC Holdings, Inc. (which subsequently merged into Lightwave Logic, Inc.) and Universal Capital Management, Inc.

The lawsuit was settled in May 2008 against all defendants by the Company making a payment of $47,500 to the plaintiff, reflected in other expenses on the statement of operations for the six month period ending June 30, 2008.

LIGHTWAVE LOGIC, INC.

(A Development Stage Company)

NOTES TO FINANCIAL STATEMENTS

JUNE 30, 2009 AND 2008

NOTE 10 RELATED PARTY

Under the management agreement dated August 1, 2005, the related party was issued 200,000 shares of common stock with a fair value of $584,000 which was amortized over the term of the agreement (one year), which expired in 2006. In February 2007, the Company entered into a contract with the related party and issued 1,000,000 shares of common stock with a fair value of $580,000. In addition, the Company issued a warrant to purchase 500,000 shares of its common stock with a fair value of $348,000. This contract was renewed in March 2008 and the Company issued a warrant to purchase 400,000 shares of its common stock in exchange for management services for one year, valued at $332,000, fair value. For the three month period ending March 31, 2009, the Company recognized $55,330 in management expense. The unamortized expense as of December 31, 2008 is reflected as deferred charges in the equity section of the balance sheet. The Company decided not to renew its management contract. The contract was terminated on February 28, 2009.

At June 30, 2009 the Company has accrued officer salaries of $42,088.

NOTE 11 SUBSEQUENT EVENTS

During July 2009, the Company issued 100,000 shares of common stock for investor relation services valued at $45,000, fair value vesting 25,000 shares each quarter commencing July 1, 2009.

Item 2.

Management s Discussion and Analysis of Financial Condition and Results of Operations.

The following management's discussion and analysis of financial condition and results of operations provides information that management believes is relevant to an assessment and understanding of our plans and financial condition. The following selected financial information is derived from our historical financial statements and should be read in conjunction with such financial statements and notes thereto set forth elsewhere herein and the "Forward-Looking Statements" explanation included herein.

Overview

Lightwave Logic, Inc., formerly, Third-Order Nanotechnologies, Inc., formerly, PSI-TEC Holdings, Inc., formerly Eastern Idaho Internet Service, Inc. was organized under the laws of the State of Nevada in 1997, where we engaged in the business of marketing Internet services until June 30, 1998 when our operations were discontinued. We were then inactive until we acquired PSI-TEC Corporation as our wholly owned subsidiary on July 14, 2004, at which time our name was changed to PSI-TEC Holdings, Inc. On October 20, 2006, we completed a parent-subsidiary merger with PSI-TEC Corporation whereby we were the surviving corporation of the merger, and our name was changed to Third-Order Nanotechnologies, Inc. On March 10, 2008, we changed our name to Lightwave Logic, Inc. to better suit our strategic business plan and to facilitate stockholder recognition of our Company and its business.

We are a developmental stage company that has developed and continues to develop high-activity, high-stability electro-optic polymers (plastics) that we believe could have a broad range of applications in the electro-optic device market. We engineer our proprietary electro-optic plastics at the molecular level for superior performance, stability, cost-efficiency and ease of processability. We expect our electro-optic plastics to broadly replace more expensive, lower-performance materials that are currently used in fiber-optic ground, wireless and satellite communication networks.

In order to transmit digital information at extremely high-speeds (wide bandwidth) over the Internet, it is necessary to convert the electrical signals produced by a computer into optical signals for transmission over long-distance fiber-optic cable. The actual conversion of electricity to an optical signal may be performed by a molecularly-engineered material known as an electro-optic plastic.

We are currently developing electro-optic plastics that promise performance many times faster than any technology currently available and that have unprecedented thermal stability. High-performance electro-optic materials produced by our Company have demonstrated stability as high as 350 degrees Celsius. Stability above 300 degrees Celsius is necessary for vertical integration into many semi-conductor production lines. Recent results, independently confirmed by the University of Arizona, have demonstrated that the molecular performance of some of our Company's molecular designs perform 650% better than competitive electro-optic compounds.

Our revenue model relies substantially on the assumption that we will be able to successfully develop electro-optic products for applications within the industries described below. When appropriate, we intend to create specific materials for each of these applications and use our proprietary knowledge base to continue to enhance its discoveries.

- Satellite Reconnaissance
- Navigational Systems
- Radar Applications
- Telecommunications
- Backplane Optical Interconnects
- Entertainment
- Medical Applications

To be successful, we must, among other things:

- Develop and maintain collaborative relationships with strategic partners;
- Continue to expand our research and development efforts for our products;

.

Develop and continue to improve on our manufacturing processes and maintain stringent quality controls;

.

Produce commercial quantities of our products at commercially acceptable prices;

.

Rapidly respond to technological advancements;

.

Attract, retain and motivate qualified personnel; and

.

Obtain and retain effective intellectual property protection for our products and technology.

We believe that Moore's Law (a principle which states the number of transistors on a silicon chip doubles approximately every eighteen months) will create markets for our high-performance electro-optic material products.

Plan of Operation

Since our inception, we have been engaged primarily in the research and development of our polymer materials technologies and potential products. We are devoting significant resources to engineer next-generation electro-optic plastics for future applications to be utilized by electro-optic device manufacturers, such as telecommunications component and systems manufacturers, networking and switching suppliers, semiconductor companies, aerospace companies and government agencies. We expect to continue to develop products that we intend to introduce to these rapidly changing markets and to seek to identify new markets. We expect to continue to make significant operating and capital expenditures for research and development activities.

As we move from a development stage company to a product vendor, we expect that our financial condition and results of operations will undergo substantial change. In particular, we expect to record both revenue and expense from product sales, to incur increased costs for sales and marketing and to increase general and administrative expense. Accordingly, the financial condition and results of operations reflected in our historical financial statements are not expected to be indicative of our future financial condition and results of operations.

On August 8, 2006, we contracted with Triple Play Communications Corporation, a design and market consulting company, to deliver a comprehensive market opportunity assessment report for high speed 40G (commercial) & 100G+ (military/aerospace) modulators and system applications.

In August, 2006 we entered into a co-location agreement with InPlane Photonics, a New Jersey-based micro-optics company that allowed our scientists to establish a pre-production line in order to test and integrate our organic materials into waveguide devices and system prototypes as a first step toward product commercialization. This agreement was terminated at the end of January 2007 so that we could focus on pursuing a strategic relationship with Photon-X LLC, a Pennsylvania-based firm with extensive experience in polymer waveguide processing. We entered into a non-binding memorandum of understanding with Photon-X, LLC in December 2006 to work towards creating a fee for services agreement with Photon-X, LLC to design, develop, produce and market electro-optic components based upon our polymer technology, which we ultimately finalized in March 2007. This agreement with Photon-X, LLC enables our Company access to a full suite of fabrication facilities capable of producing commercial quantities of precision micro-optic devices such as high-speed (40GHz) telecom modulators, optical filters, and optical interconnects important to military and civilian global information movement and management markets.

On September 25, 2006 we obtained independent laboratory results that confirmed the thermal stability of our Perkinamine electro-optic materials. Thermal stability as high as 350 degrees Celsius was confirmed, significantly exceeding many other commercially available high performance electro-optic materials, such as CLD-1 which exhibits thermal degradation in the range of 250 degrees Celsius to 275 degrees Celsius. This high temperature stability of our materials eliminates a major obstacle to vertical integration of electro-optic polymers into standard microelectronic manufacturing processes (e.g. wave/vapor-phase soldering) where thermal stability of at least 300 degrees Celsius is required. In independent laboratory tests, ten-percent material degradation, a common evaluation of overall thermal stability, did not occur until our Perkinamine material base was exposed to temperatures as high as 350 degrees Celsius, as determined by Thermo-Gravimetric Analysis (TGA). The test results supported our Company's progress to introduce our materials into commercial applications such as optical interconnections, high-speed telecom and datacom modulators, and military/aerospace components.

In July 2007, our Company developed an innovative process to integrate our unique architecture into our anticipated commercial devices, whereby dendritic spacer systems are attached to its core chromophore. In the event we are successful in developing a commercially viable product, we believe these dendrimers will reduce the cost of manufacturing materials and reduce the cost and complexity of tailoring the material to specific customer requirements.

In January 2008, we retained TangibleFuture, Inc., a San Francisco based technology analysis and business development consulting company, to generate an independent assessment of our business opportunities in the fiber-optic telecommunications and optical computing sectors and develop strategies to penetrate those potential markets.

In March 2008, we commenced production of our first prototype photonic chip, which we delivered to Photon-X, LLC to fabricate a prototype polymer optical modulator and measure its technical properties. As a result of delays caused by engineering setbacks related to our material production, the production of our first prototype photonic chip was temporarily halted, along with the completion of our proof of concept tests that were being administered by Dr. Robert Norwood at the University of Arizona Photonics Department. In order to address this issue, Dr. David Eaton s role and responsibilities with the Company were significantly expanded, and we added two veteran synthetic chemists to our science and technology team. We have since overcome a majority of these engineering setbacks and we are currently in the continual process of extensive testing for material performance, including, among other tests, the (r33) Teng-Man testing protocol. In June 2009 we released test results conducted by Dr. C.C. Teng that re-confirmed our previous test results, and we intend to deliver completed independent validated material performance test results, including the (r33) Teng-Man testing protocol, as they become ripe for release.

In August 2009, we retained Perdix, Inc. to help us identify and build prototype products for high growth potential target markets in fiber optic telecommunications systems. We expect an initial prototype of a functional phase modulator that utilizes our prototype photonic chip to be completed by the end of the third quarter 2009, and we anticipate completing the development and building of functional prototype 40 Gb/s and 100 Gb/s modulators during the first and second quarter of 2010. However, we may incur delays in this process due to slower than expected material production within our laboratories and/or delays caused by the production of the modulator and testing procedures.

We ultimately intend to use our next-generation electro-optic plastics for future applications vital to the following industries. We expect to create specific materials for each of these applications as appropriate:

.

Satellite Reconnaissance

.

Navigational Systems

.

Radar Applications

.

Telecommunications

.

Backplane Optical Interconnects

.

Entertainment

.

Medical Applications

In an effort to maximize our future revenue stream from our electro-optic polymer products, we are currently evaluating each of or some combination of the following approaches:

.

Licensing our technology for individual specific applications;

.

Entering into collaborative or joint venture agreements with one or a number of partners; or

.

Selling our products directly to commercial customers.

Additionally, we must create an infrastructure, including operational and financial systems, and related internal controls, and recruit qualified personnel. Failure to do so could adversely affect our ability to support our operations.

We have incurred substantial net losses since inception. We have satisfied our capital requirements since inception primarily through the issuance and sale of our common stock. During 2004 we raised approximately $529,000 from the issuance of convertible promissory notes, of which $30,000 was converted into common stock of the company during 2004 and the remaining $499,000 converted in 2005. Also, during 2005, we raised an aggregate of $1,000,000 from the private sale of our common stock. During 2006, we raised approximately $425,000 from the private sale of our common stock, of which $200,000 was rescinded during 2007. During 2007, we raised approximately $2,301,524 from the private sale of our common stock. During 2008, we raised approximately $414,000 from the private sale of our common stock and $375,270 upon the exercise of existing warrant holder s warrants. Through June 30, 2009, we raised approximately $855,000 from the sale of our private stock. We have also issued shares of our common stock and warrants to purchase shares of our common stock in exchange for services rendered to our company, including professional services.

Award

On September 26, 2006, we were awarded the 2006 Electro-Optic Materials Technology Innovation of the Year Award by Frost & Sullivan. Frost & Sullivan's Technology Innovation of the Year Award is bestowed upon candidates whose original research has resulted in innovations that have, or are expected to bring, significant contributions to multiple industries in terms of adoption, change, and competitive posture. This award recognizes the quality and depth of our Company's research and development program as well as the vision and risk-taking that enabled us to undertake such an endeavor.

Results of Operations

Comparison of three months ended June 30, 2009 to three months ended June 30, 2008

Revenues

We had no revenues during the three months ended June 30, 2009 and 2008 since we are a development stage company that has yet to commence revenue creating operations.

Operating Expenses

Our operating expenses were $677,621 and $1,481,308 for the three months ended June 30, 2009 and 2008, respectively, for a decrease of $803,687. This decrease in operating expenses was due primarily to a decrease in consulting fees.

Included in our operating expenses for the three months ended June 30, 2009 was $272,920 for research and development expenses compared to $254,881 for the three months ended June 30, 2008, for an increase of $18,039 primarily due to additional amortization of options. Research and development expenses currently consist primarily of compensation for employees engaged in internal research and product development activities; laboratory operations, outsourced development and processing work; fees; costs; and related operating expenses.

Wages and salaries and option amortization increased $51,784 from $165,670 for the three months ended June 30, 2008 to $217,454 for the three months ended June 30, 2009 primarily due to the amortization of options. Consulting expenses decreased $36,645 from $36,645 for the three months ended June 30, 2008 to $0 for the three months ended June 30, 2009.

We expect to continue to incur substantial research and development expense to develop and commercialize our electro-optic material platform. These expenses could increase as a result of continued development and commercialization of our electro-optic materials technology; subcontracting work to build prototypes; expanding and equipping in-house laboratories; hiring additional technical and support personnel; pursuing other potential business opportunities; and incurring related operating expenses.

General and administrative expense consists primarily of compensation and support costs for management staff, and for other general and administrative costs, including executive, marketing, investor relations, accounting and finance, legal, consulting and other operating expenses.

General and administrative expenses decreased $821,726 to $404,701 for the three months ended June 30, 2009 compared to $1,226,427 for the three months ended June 30, 2008. This decrease is primarily due to a warrant agreement for consulting services in the second quarter of 2008 valued at $976,193.

Management fees decreased $84,167 to $0 for the three months ended June 30, 2009 from $84,167 for the three months ended June 30, 2008 since the Company decided not to renew its management contract on February 28, 2009. Accounting fees increased $39,616 to $49,000 from $9,384 since the operations for the three months ended June 30, 2009 included fees associated with startup, preparation of the 2008 10-K, resolution of prior payroll tax filing issues primarily associated with the October 2006 reorganization and other accounting issues. Included in results of operations for the three months ended June 30, 2009 is amortization of warrants of $71,153 for accounting and administrative services. Management fees previously discussed for the three months ended June 30, 2008 of $84,167 included accounting and administrative services. Executive compensation increased $102,966 to $171,706 from $68,740 mostly due to option amortization. Legal fees increased $21,870 to $45,507 for the three months ended June 30, 2009 compared to $23,637 for the three months ended June 30, 2008.

We expect general and administrative expense to increase in future periods as we increase the level of corporate and administrative activity, including increases associated with our operation as a public company; and significantly increase expenditures related to the future production and sales of our products.

Net Loss

Net loss was $678,203 and $1,478,060 for the three months ended June 30, 2009 and 2008, respectively, for a decrease of $799,857, primarily resulting from the consulting agreement executed in the three months ended June 30, 2008.

Comparison of six months ended June 30, 2009 to six months ended June 30, 2008

Revenues

We had no revenues during the six months ended June 30, 2009 and 2008 since we are a development stage company that has yet to commence revenue creating operations.

Operating Expenses

Our operating expenses were $1,434,605 and $2,446,243 for the six months ended June 30, 2009 and 2008, respectively, for a decrease of $1,011,638. This decrease in operating expenses was due primarily to a decrease in consulting fees.

Included in our operating expenses for the six months ended June 30, 2009 was $722,636 for research and development expenses compared to $630,771 for the six months ended June 30, 2008, for an increase of $91,865. This is primarily due to increase in wages and salaries and amortization of options.

Wages and salaries and option amortization increased $282,812 from $340,504 for the six months ended June 30, 2008 to $623,316 for the six months ended June 30, 2009 due primarily to the amortization of options. Consulting expenses decreased $181,742 from $181,742 for the six months ended June 30, 2008 to $0 for the six months ended June 30, 2009.

Research and development expenses currently consist primarily of compensation for employees engaged in internal research and product development activities; laboratory operations, outsourced development and processing work; fees; costs; and related operating expenses. The increase is primarily due to research and development employee compensation expense.

We expect to continue to incur substantial research and development expense to develop and commercialize our electro-optic material platform. These expenses could increase as a result of continued development and commercialization of our electro-optic materials technology; subcontracting work to build prototypes; expanding and equipping in-house laboratories; hiring additional technical and support personnel; pursuing other potential business opportunities; and incurring related operating expenses.

General and administrative expense consists primarily of compensation and support costs for management staff, and for other general and administrative costs, including executive, marketing, investor relations, accounting and finance, legal, consulting and other operating expenses.

General and administrative expenses decreased $1,103,503 to $711,969 for the six months ended June 30, 2009 compared to $1,815,472 for the six months ended June 30, 2008. This decrease is due to warrant agreements for consulting services during the six month period ending June 30, 2008 valued at $976,193. There were also decreases in management fees, legal fees, market research fees, which were offset by an increase in executive compensation, accounting and other costs for the six months ended June 30, 2009 compared to the six months ended June 30, 2008.

Management fees decreased $210,005 to $55,330 for the six months ended June 30, 2009 from $265,335 for the six months ended June 30, 2008 since the Company decided not to renew its management contract on February 28, 2009. Legal fees decreased $73,698 to $63,358 for the six months ended June 30, 2009 compared to $137,056 for the six months ended June 30, 2008. The decrease was due to the Company filing its first Form 10K-SB with the SEC in March 2008.

Market research, investor relations and public relation fees decreased $139,587 to $1,662 from $141,249 for the six months ended June 30, 2009 and 2008. During the six months of 2008, the Company entered into contracts for market research, investor relations and public relations.

Accounting fees increased $39,443 to $58,000 from $18,557 since the operations for the six months ended June 30, 2009 included fees associated with startup, preparation of the 2008 10-K, resolution of prior payroll tax filing issues primarily associated with the October 2006 reorganization and other accounting issues. Included in results of operations for the six months ended June 30, 2009 is amortization of warrants of $71,153 for accounting and administrative services. Management fees previously discussed for the six months ended June 30, 2008 of $265,335 included accounting and administrative services.

Executive compensation increased $158,907 to $342,003 from $183,096 mostly due to option amortization.

We expect general and administrative expense to increase in future periods as we increase the level of corporate and administrative activity, including increases associated with our operation as a public company; and significantly increase expenditures related to the future production and sales of our products.

Other Income (Expense)

Other expense for the six months ended June 30, 2008 consists primarily of the settlement of a lawsuit in the amount of $47,500.

Net Loss

Net loss was $1,435,600 and $2,486,712 for the six months ended June 30, 2009 and 2008, respectively, for a decrease of $1,051,112, primarily resulting from the reduction in consulting expense in the six months ended June 30, 2009.

Significant Accounting Policies

Our discussion and analysis of our financial condition and results of operations are based on our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates based upon historical experience and various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Our actual results may differ materially from these estimates.

We believe our critical accounting policies affect our more significant estimates and judgments used in the preparation of our financial statements. Our Annual Report on Form 10-K for the year ended December 31, 2008 contains a discussion of these critical accounting policies. There have been no significant changes in our critical accounting policies since December 31, 2008. See our Note 1 in our unaudited financial statements for the six months ended June 30, 2009, as set forth herein.

Liquidity and Capital Resources

During the six moths ended June 30, 2009, net cash used in operating activities was $521,990 and net cash used in investing activities was $3,145, which was due primarily to the Company s research and development activities and general and administrative expenditures. Net cash provided by financing activities for the six months ended June 30, 2009 was $1,232,872. At June 30, 2009, our cash and cash equivalents totaled $795,962, our assets totaled $1,072,232, our liabilities totaled $61,391, and we had stockholders' equity of $1,010,841.

Sources and Uses of Cash

Our future expenditures and capital requirements will depend on numerous factors, including: the progress of our research and development efforts; the rate at which we can, directly or through arrangements with original equipment manufacturers, introduce and sell products incorporating our plastic materials technology; the costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights; market acceptance of our products and competing technological developments; and our ability to establish cooperative development, joint venture and licensing arrangements. We expect that we will incur approximately $500,000 to $600,000 of expenditures through the remainder of 2009. Our cash requirements are expected to increase at a rate consistent with the Company s path to revenue growth as we expand our activities and operations with the objective of commercializing our electro-optic plastic technology during the latter portion of 2009. Presently, management expects to have a prototype modulator completed by the end of third quarter of 2009.

Our business does not presently generate the cash needed to finance our current and anticipated operations. We believe we have raised sufficient capital to finance our operations through January 2010, and outstanding investor warrants, if exercised before their expiration, (the last of which expire in April 2010), could supply the necessary funds to maintain our operations through October 2010. However, we will need to obtain additional future financing after such time or times to continue to finance our operations until such time that we can conduct profitable revenue-generating activities. Such future sources of financing may include cash from exercise of warrants, equity offerings, exercise of stock options and proceeds from debt instruments; but we cannot assure you that such equity or borrowings will be available or, if available, will be at rates or prices acceptable to us. If adequate funds are not available to satisfy either short-term or long-term capital requirements, or if planned revenues are not generated, we may be required to substantially limit our operations. This limitation of operations may include reductions in capital expenditures and reductions in staff and discretionary costs. Successful completion of the Company s prototype could lead to adequate financing to fulfill its development activities and achieve a level of revenue adequate to support the Company s business plan for the foreseeable future.

We expect that our cash used in operations will increase during the remainder of 2009 and beyond as a result of the following planned activities:

.

The addition of management, sales, marketing, technical and other staff to our workforce;

.

Increased spending for the expansion of our research and development efforts, including purchases of additional laboratory and production equipment;

.

Increased spending in marketing as our products are introduced into the marketplace;

.

Developing and maintaining collaborative relationships with strategic partners;

.

Developing and improving our manufacturing processes and quality controls; and

.

Increases in our general and administrative activities related to our operations as a reporting public company and related corporate compliance requirements.

Analysis of Cash Flows

For the six moths ended June 30, 2009

Net cash used in operating activities was $521,990 for the six moths ended June 30, 2009, consisting of payments for management, legal, professional and consulting expenses, rent and other expenditures necessary to develop our business infrastructure, offset by $55,330 in deferred charges, $71,153 in warrants issued for services, $523,361 in options issued for services, $128,000 in common stock issued for services, $132,058 in purchase right agreement amortization, $6,348 in depreciation, $6,867 in prepaid expenses and ($9,507) in accounts payable and accrued expenses.

Net cash used by investing activities was $3,145 for the six moths ended June 30, 2009, consisting of cost for intangibles.

Net cash provided by financing activities was $1,232,872 for the six moths ended June 30, 2009 and consisted of $855,000 from the issuance of common stock, $320,234 from the exercise of warrants, $45,138 from the exercise of purchase right agreements and $12,500 of proceeds from a subscription receivable.

Inflation and Seasonality

We do not believe that our operations are significantly impacted by inflation. Our business is not seasonal in nature.

Item 3.

Quantitative and Qualitative Disclosures about Market Risk.

Not applicable.

Item 4.

Controls and Procedures.

Disclosure Controls and Procedures. As of June 30, 2009, an evaluation was performed under the supervision and with the participation of the Company's principal executive officer and financial officer of the effectiveness of the design and operation of the Company s disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this report. The evaluation revealed to the Company's principal executive officer and financial officer that the design and operation of the Company's disclosure controls and procedures were effective as of the end of the period covered by this report.

Changes in Internal Control Over Financial Reporting.   There has been no change in our internal control over financial reporting during our last fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II - OTHER INFORMATION

Item 1.

Legal Proceedings.

Not applicable.

Item 1A.

Risk Factors.

Not applicable.

Item 2.

Unregistered Sales of Equity Securities and Use of Proceeds.

Not applicable.

Item 3.

Defaults Upon Senior Securities.

Not applicable.

Item 4.

Submission of Matters to a Vote of Security Holders.

Not applicable.

Item 5.

Other Information.

Not applicable.

Item 6.

Exhibits

The following exhibits are included herein:

Exhibit No.	Description of Exhibit
10.1	2007 Employee Stock Plan*
31.1	Certification pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended, executed by the Principal Executive Officer of the Company.
31.2	Certification pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended, executed by the Principal Financial Officer of the Company.

32.1

Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, executed by the Principal Executive Officer of the Company.

32.2

Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, executed by the Principal Financial Officer of the Company.

*

Incorporated by reference to the Company's Definitive Schedule 14C Information Statement filed on February 19, 2008.

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.

LIGHTWAVE LOGIC, INC.

Registrant

By: /s/ James S. Marcelli
James S. Marcelli,

Chief Executive Officer

Date: August 14, 2009

By: /s/ James S. Marcelli
James S. Marcelli,

Chief Executive Officer

Date: August 14, 2009

By: /s/ Andrew J. Ashton
Andrew J. Ashton,

Treasurer

Date: August 14, 2009