To the Honorable Commissioner of Patents.

1. Name of conveying party(ies):
   Crystal Semiconductor Corporation
   4210 S. Industrial Drive
   Austin, Texas 78744

Additional name(s) of conveying party(ies) attached? [ ] Yes [X] No

3. Nature of conveyance:
   [X] Assignment
   [ ] Security Agreement
   [ ] Merger
   [ ] Change of Name
   [ ] Other:
   Execution Date: March 22, 2000

4. Application number(s) or patent number(s):
   B. Patent No.(s) 4,709,225; 4,746,899; 4,748,418;
     4,804,863; 4,805,198; 4,849,662; 4,851,841; 4,918,454;
     4,939,516; 4,941,156; 4,943,607; 4,988,954; 5,012,244;
     5,039,889; 5,055,848; 5,061,925; 5,068,660; 5,079,550;
     5,087,914; 5,088,107; 5,111,451; 5,117,200; 5,121,080;
     5,140,279; 5,150,388; 5,157,395; 5,172,115; 5,187,390;
     5,196,850; 5,198,762; 5,208,957; 5,212,699; 5,220,483;
     5,239,210; 5,249,344; 5,247,210; 5,248,370; 5,257,026;
     5,258,758; 5,268,651; 5,274,375; 5,319,319; 5,319,370;
     5,339,067; 5,351,050; 5,376,936; 5,397,944; 5,412,348;
     5,440,306; 5,475,323; 5,477,481; 5,497,122; 5,528,243;
     5,541,598; 5,541,864; 5,578,247; 5,583,601; 5,585,763;
     5,590,065; 5,594,439; 5,594,442; 5,594,812; 5,608,676;
     5,621,339; 5,631,900; 5,642,078; 5,644,098; 5,644,257;
     5,644,308; 5,652,585; 5,655,929; 5,668,794; 5,696,708;
     5,698,806; 5,744,739; 5,748,040; 5,748,684; 5,751,179;
     5,764,753; 5,767,722; 5,777,909; 5,777,912; 5,787,029;
     5,818,370; 5,824,936; 5,825,244; 5,886,658; 5,917,917;
     5,923,273; 5,960,401; and 5,978,825.

Additional numbers attached? [ ] Yes [X] No

5. Name and address of party to whom correspondence concerning document should be mailed:
   Name: CIRRUS LOGIC, INC. - Legal Dept.
   Address: 4210 S. Industrial Drive.
   Austin, Texas 78744

6. Total number of applications and patents involved: 91
   Total fee (37 CFR 3.41): $40.00 X 91 = $3,640.00
   [ ] Enclosed
   [X] Authorized to be charged to deposit account, if necessary

8. Deposit account number: 03-2028

   To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

   Peter T. Rutkowski
   Name of Person Signing
   Registration No. 32,627

   April 4, 2000
   Date

   Total number of pages including cover sheet, attachments, and document: 4

   Do not detach this portion

   Mail documents to be recorded with required cover sheet information to:
   Assistant Commissioner for Patents
   Box 19 and 19C
   Washington, D.C. 20231

   Public burden reporting for this sample cover sheet is estimated to average about 30 minutes per document to be recorded, including time for reviewing the document and gathering the data needed, and completing and reviewing the sample cover sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Office of Information Systems, PK-2-1002C, Washington, D.C. 20231, and to the Office of Management and Budget, Paperwork Reduction Project (0651-0011), Washington, D.C. 20503.
ASSIGNMENT OF PATENT RIGHTS

For the sum of ten dollars ($10.00) and other good and valuable consideration, Crystal Semiconductor Corporation ("Crystal"), a Delaware Corporation, having a place of business at 4210 S. Industrial Drive, Austin, Texas 78744, hereby sells, assigns and transfers to Cirrus Logic, Inc., ("Cirrus Logic") a Delaware Corporation, having a place of business at 4210 S. Industrial Drive, Austin, Texas 78744, its successors and assigns, one half (50%) of the entire right, title and interest in and to:


B. United States Patent Nos.:
sensitivity of a ratiometric converter type of circuit 37. 5,541,864 Arithmetic-free digital interpolation filter architecture 38. 5,541,599 Data independent loading of a reference in a discrete time system 39. 5,528,239 Low noise transmission of output data from a delta-sigma modulator 40. 5,497,122 Low power class-AB integrated circuit amplifier 41. 5,477,481 Switched-capacitor integrator with chopper stabilization performed at the sampling rate 42. 5,475,323 Amplifier with input common mode compensation 43. 5,440,305 Method and apparatus for calibration of a monolithic voltage reference 44. 5,412,348 Compound triple cascaded mirror 45. 5,397,944 Dense offset calibration circuitry and method 46. 5,376,936 One-bit switched-capacitor D/A circuit with continuous time linearity 47. 5,351,050 Detent switching of summing node capacitors of a delta-sigma modulator 48. 5,339,067 Integrated voltage divider and circuit employing an integrated voltage divider 49. 5,319,370 Analog-to-digital converter with a continuously calibrated voltage reference 50. 5,319,319 Low drift resistor structure for amplifiers 51. 5,274,375 Delta-sigma modulator for an analog-to-digital converter with low thermal noise performance 52. 5,268,651 Low drift resistor structure 53. 5,258,758 DAC shutdown for low power supply condition 54. 5,257,026 Method and apparatus for calibrating a multi-bit delta-sigma modular 55. 5,248,970 Offset calibration of a DAC using a calibrated ADC 56. 5,247,210 Method and circuitry for decreasing the recovery time of an MOS differential voltage comparator 57. 5,245,344 High order switched-capacitor filter with DAC input 58. 5,239,210 Low distortion unity gain amplifier for DAC 59. 5,212,659 Low precision finite impulse response filter for digital interpolation 61. 5,208,597 Compensated capacitors for switched capacitor input of an analog-to-digital converter 62. 5,198,782 Low distortion amplifier output stage for DAC 63. 5,196,850 Fourth order digital delta-sigma modulator 64. 5,187,390 Input sampling switch charge conservation 65. 5,172,115 Ratiometric A/D converter with non-ratiometric error offset 66. 5,157,395 Variable decimation architecture for a delta-sigma analog-to-digital converter 67. 5,150,386 Clock multiplier/jitter attenuator 68. 5,140,279 Slew rate enhanced linear amplifier 69. 5,121,080 Amplifier with controlled output impedance 70. 5,117,200 Compensation for a feedback amplifier with current output stage 71. 5,111,451 Method and apparatus for synchronizing an optical transceiver over a full duplex data communication channel 72. 5,088,107 Linear channel bandwidth calibration circuit 73. 5,087,914 DC calibration system for a digital-to-analog converter 74. 5,079,550 Combining continuous time and discrete time signal processing in a delta-sigma modulator 75. 5,068,660 Combining fully-differential and single-ended signal processing in a delta-sigma modulator 76. 5,061,925 Phase equalization system for a digital-to-analog converter utilizing separate digital and analog sections 77. 5,055,846 Method for tone avoidance in delta-sigma converters 78. 5,039,989 Delta-sigma analog-to-digital converter with chopper stabilization at the sampling frequency 79. 5,012,244 Delta-sigma modulator with oscillation detect and reset circuit 80. 4,988,954 Low power output stage circuitry in an amplifier 81. 4,943,807 Digitally calibrated delta-sigma analog-to-digital converter 82. 4,941,156 Linear jitter attenuator 83. 4,939,516 Chopper stabilized delta-sigma analog-to-digital converter 84. 4,918,454 Compensated capacitors for switched capacitor input of an analog-to-digital converter 86. 4,849,662 Switched-capacitor filter having digitally-programmable capacitive element 87. 4,805,198 Clock multiplier/jitter attenuator 88. 4,804,863 Method and circuitry for generating reference voltages 89. 4,748,418 Quasi auto-zero circuit for sampling amplifiers 91. 4,709,225 Self-calibration method for capacitors in a monolithic integrated circuit.
Executed this 22nd day of March, 2000.

Crystal Semiconductor Corporation
Position: President & CEO

STATE OF TEXAS

COUNTY OF TRAVIS

On March 20, 2000, before me, Crystal J. Levesque personally appeared David D. French personally known to me or proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal:

Crystal J. Levesque
NOTARY PUBLIC
By and for the State of Texas
My Commission expires: April 15, 2003