

## INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

OMB APPROVAL

OMB Number: 3235-0104  
Estimated average burden  
hours per response: 0.5Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934  
or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person* <u>Yow Mai Chan</u>  (Last) (First) (Middle) <u>FLUIDIGM CORPORATION</u> <u>7000 SHORELINE COURT SUITE 100</u>  (Street) <u>SOUTH SAN FRANCISCO CA 94080</u>  (City) (State) (Zip)	2. Date of Event Requiring Statement (Month/Day/Year) <u>02/09/2011</u>	3. Issuer Name and Ticker or Trading Symbol <u>FLUIDIGM CORP [ FLDM ]</u>	
		4. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) <u>VP, WW Mfg &amp; MD-Singapore</u>	5. If Amendment, Date of Original Filed (Month/Day/Year)
		6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person Form filed by More than One Reporting Person	

## Table I - Non-Derivative Securities Beneficially Owned

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)
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## Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)		4. Conversion or Exercise Price of Derivative Security	5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date	Title	Amount or Number of Shares			
Stock Option (Right to Buy)	(1)	(1)	Common Stock	5,780 <sup>(2)</sup>	4.09	D	
Stock Option (Right to Buy)	(3)	(3)	Common Stock	5,780 <sup>(2)</sup>	4.09	D	
Stock Option (Right to Buy)	(4)	(4)	Common Stock	5,780 <sup>(2)</sup>	8.38	D	
Stock Option (Right to Buy)	(5)	(5)	Common Stock	5,780 <sup>(2)</sup>	8.38	D	
Stock Option (Right to Buy)	(6)	(6)	Common Stock	24,772 <sup>(2)</sup>	3.4	D	
Stock Option (Right to Buy)	(7)	(7)	Common Stock	8,257 <sup>(2)</sup>	4.45	D	
Stock Option (Right to Buy)	(8)	(8)	Common Stock	32,865 <sup>(2)</sup>	4.45	D	
Stock Option (Right to Buy)	(9)	(9)	Common Stock	8,257 <sup>(2)</sup>	4.45	D	
Stock Option (Right to Buy)	(10)	(10)	Common Stock	8,257 <sup>(2)</sup>	4.45	D	
Stock Option (Right to Buy)	(11)	(11)	Common Stock	11,560 <sup>(2)</sup>	4.45	D	
Stock Option (Right to Buy)	(12)	(12)	Common Stock	6,605 <sup>(2)</sup>	4.45	D	

## Explanation of Responses:

- Reflects a 1-for-1.73 reverse stock split of the Issuer's outstanding shares effected February 3, 2011.
- 100% of the shares subject to the Option will vest on December 31, 2012; provided that a percentage of the Option equal to the percentage of the reporting person's departmental goals that are achieved would become fully vested effective as of December 31, 2009. The compensation committee determined that the reporting person met 60% of the performance criteria for 2009, resulting in the vesting of the Option as to 3,468 shares on December 31, 2009 and the remaining shares vest on December 31, 2012. The Option shall expire on November 17, 2019.
- The compensation committee determined that 70% of the Issuer's corporate goals for 2009 had been achieved. This resulted in 70% of the shares subject to the Option vesting on December 31, 2009, 25% of the remaining 30% of the shares subject to the Option vested on April 1, 2010 and 1/48th of the remaining unvested shares subject to the Option shall vest each month thereafter such that all shares subject to the Option shall be fully vested on April 1, 2013. The Option shall expire on November 17, 2019.
- 25% of the shares subject to the Option shall vest on the one year anniversary of April 1, 2010 (the "Vesting Commencement Date"), and thereafter 1/48th of the shares subject to the Option shall vest on each monthly anniversary of the Vesting Commencement Date such that the Option will be fully vested on April 1, 2014; provided that vesting for a percentage of the Option equal to the Company's percentage achievement of its 2010 corporate goals shall be accelerated to December 31, 2010. The compensation committee has not yet made a determination regarding the achievement of 2010 corporate goals. The percentage of the Option not accelerated shall vest over 4 years as described above. Vesting is subject to the reporting person continuing to be a service provider on such dates. The Option shall expire on January 4, 2021.
- 100% of the shares subject to the Option shall vest on April 1, 2014; provided that vesting for a percentage of the shares subject to the Option equal to the reporting person's percentage achievement of his 2010 departmental goals shall be accelerated to December 31, 2010. The shares, if any, not subject to such accelerated vesting shall vest on April 1, 2014. Vesting is subject to the reporting person continuing to be a service provider on such dates. The Option shall expire on January 4, 2021.
- The Option fully vested on June 8, 2009 and shall expire on August 2, 2015.
- The Option was originally granted on September 27, 2006 and was re-granted on December 23, 2009 as part of the Issuer's option repricing. The Option fully vested on December 27, 2010 and shall expire on September 26, 2016.
- The Option was originally granted on May 8, 2007 and was re-granted on December 23, 2009 as part of the Issuer's option repricing. The Option fully vested on May 1, 2010 and shall expire on May 7, 2017.
- The Option was originally granted on April 23, 2008 and was re-granted on December 23, 2009 as part of the Issuer's option repricing. 6,089 shares subject to the Option were vested as of the re-grant date, an additional 1,651 shares will vest on December 31, 2011 and 172 shares will vest monthly thereafter. The Option will fully vest on March 31, 2012 and shall expire on April 23, 2018.
- The Option was originally granted on April 23, 2008 and was re-granted on December 23, 2009 as part of the Issuer's option repricing. 5,215 shares subject to the Option were vested as of the re-grant date and thereafter 97 shares vested monthly until January 1, 2010 and thereafter 171 shares will vest monthly. The Option will fully vest on May 1, 2012 and shall expire on April 23, 2018.
- The Option was originally granted on April 23, 2008 and was re-granted on December 23, 2009 as part of the Issuer's option repricing. 10,837 shares subject to the Option will vest as of December 31, 2011

and 241 shares will vest monthly thereafter. The Option will fully vest on March 31, 2012 and shall expire on April 23, 2018.

12. The Option was originally granted on April 24, 2008 and was re-granted on December 23, 2009 as part of the Issuer's option repricing. The Option fully vested on March 22, 2010 and shall expire on April 23, 2018.

**Remarks:**

Exhibit List ----- Exhibit 24 - Power of Attorney

/s/ Gajus V. Worthington,  
attorney-in-fact

02/09/2011

\*\* Signature of Reporting Person

Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

\* If the form is filed by more than one reporting person, see Instruction 5 (b)(v).

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

**Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.**

POWER OF ATTORNEY

The undersigned, as a Section 16 reporting person of Fluidigm Corporation (the "Company"), hereby constitutes and appoints the officers of the Company and the responsible attorneys and paralegals of Wilson Sonsini Goodrich & Rosati, P.C., and each of them, the undersigned's true and lawful attorney-in-fact to:

1. complete and execute Forms ID, 3,4 and 5 and other forms and all amendments thereto as such attorney-in-fact shall in his or her discretion determine to be required or advisable pursuant to Section 16 of the Securities Exchange Act of 1934 (as amended) and the rules and regulations promulgated thereunder, or any successor laws and regulations, as a consequence of the undersigned's ownership, acquisition or disposition of securities of the Company; and
2. do all acts necessary in order to file such forms with the Securities and Exchange Commission, any securities exchange or national association, the Company and such other person or agency as the attorney-in-fact shall deem appropriate.

The undersigned hereby ratifies and confirms all that said attorney-in-fact and agents shall do or cause to be done by virtue hereof. The undersigned acknowledges that the foregoing attorney-in-fact, in serving in such capacity at the request of the undersigned, are not assuming, nor is the Company assuming, any of the undersigned's responsibilities to comply with Section 16 of the Securities Exchange Act of 1934 (as amended).

This Power of Attorney shall remain in full force and effect until the undersigned is no longer required to file Forms ID, 3, 4 and 5 with respect to the undersigned's holdings of and transactions in securities issued by the Company, unless earlier revoked by the undersigned in a signed writing delivered to the Company and the foregoing attorney-in-fact.

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of this 7th day of February, 2011.

Signature: /s/ Grace Yow

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Grace Yow