

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

Filed 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>Smith William Maxwell</u>	2. Date of Event Requiring Statement (Month/Day/Year) 02/09/2011	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, Legal Affairs & GC</u>	5. If Amendment, Date of Original Filed (Month/Day/Year)
(Last) (First) (Middle) <u>FLUIDIGM CORPORATION</u> <u>7000 SHORELINE COURT SUITE 100</u>			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
(Street) <u>SOUTH SAN FRANCISCO CA 94080</u>			
(City) (State) (Zip)			

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)
<u>Common Stock</u>	<u>49,545⁽¹⁾</u>	<u>D</u>	

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			
<u>Stock Option (Right to Buy)</u>	<u>(2)</u>	<u>(2)</u>	<u>Common Stock</u>	<u>5,780⁽¹⁾</u>	<u>4.09</u>	<u>D</u>	
<u>Stock Option (Right to Buy)</u>	<u>(3)</u>	<u>(3)</u>	<u>Common Stock</u>	<u>5,780⁽¹⁾</u>	<u>4.09</u>	<u>D</u>	
<u>Stock Option (Right to Buy)</u>	<u>(4)</u>	<u>(4)</u>	<u>Common Stock</u>	<u>5,780⁽¹⁾</u>	<u>8.38</u>	<u>D</u>	
<u>Stock Option (Right to Buy)</u>	<u>(5)</u>	<u>(5)</u>	<u>Common Stock</u>	<u>5,780⁽¹⁾</u>	<u>8.38</u>	<u>D</u>	
<u>Stock Option (Right to Buy)</u>	<u>(6)</u>	<u>(6)</u>	<u>Common Stock</u>	<u>6,440⁽¹⁾</u>	<u>1.82</u>	<u>D</u>	
<u>Stock Option (Right to Buy)</u>	<u>(7)</u>	<u>(7)</u>	<u>Common Stock</u>	<u>16,515⁽¹⁾</u>	<u>3.4</u>	<u>D</u>	
<u>Stock Option (Right to Buy)</u>	<u>(8)</u>	<u>(8)</u>	<u>Common Stock</u>	<u>28,901⁽¹⁾</u>	<u>1.82</u>	<u>D</u>	
<u>Stock Option (Right to Buy)</u>	<u>(9)</u>	<u>(9)</u>	<u>Common Stock</u>	<u>7,431⁽¹⁾</u>	<u>2.43</u>	<u>D</u>	
<u>Stock Option (Right to Buy)</u>	<u>(10)</u>	<u>(10)</u>	<u>Common Stock</u>	<u>8,821⁽¹⁾</u>	<u>4.45</u>	<u>D</u>	
<u>Stock Option (Right to Buy)</u>	<u>(11)</u>	<u>(11)</u>	<u>Common Stock</u>	<u>7,693⁽¹⁾</u>	<u>4.45</u>	<u>D</u>	
<u>Stock Option (Right to Buy)</u>	<u>(12)</u>	<u>(12)</u>	<u>Common Stock</u>	<u>11,560⁽¹⁾</u>	<u>4.45</u>	<u>D</u>	
<u>Stock Option (Right to Buy)</u>	<u>(13)</u>	<u>(13)</u>	<u>Common Stock</u>	<u>8,257⁽¹⁾</u>	<u>4.45</u>	<u>D</u>	
<u>Stock Option (Right to Buy)</u>	<u>(14)</u>	<u>(14)</u>	<u>Common Stock</u>	<u>8,257⁽¹⁾</u>	<u>4.45</u>	<u>D</u>	
<u>Stock Option (Right to Buy)</u>	<u>(15)</u>	<u>(15)</u>	<u>Common Stock</u>	<u>7,344⁽¹⁾</u>	<u>4.45</u>	<u>D</u>	
<u>Stock Option (Right to Buy)</u>	<u>(16)</u>	<u>(16)</u>	<u>Common Stock</u>	<u>12,143⁽¹⁾</u>	<u>4.45</u>	<u>D</u>	
<u>Stock Option (Right to Buy)</u>	<u>(17)</u>	<u>(17)</u>	<u>Common Stock</u>	<u>5,176⁽¹⁾</u>	<u>4.45</u>	<u>D</u>	
<u>Stock Option (Right to Buy)</u>	<u>(18)</u>	<u>(18)</u>	<u>Common Stock</u>	<u>6,383⁽¹⁾</u>	<u>4.45</u>	<u>D</u>	

Explanation of Responses:

1. Reflects a 1-for-1.73 reverse stock split of the Issuer's outstanding shares effected February 3, 2011.

2. 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 90% of the performance criteria for 2009, resulting in the vesting of the Option as to 5,202 shares on December 31, 2009 and the remaining shares subject to the option to vest on December 31, 2012. The Option shall expire on November 17, 2019.

3. 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.

4. 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.

5. 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.

6. The Option fully vested on December 4, 2005 and shall expire on December 4, 2011.

7. The Option fully vested on January 18, 2009 and shall expire on January 17, 2015.

8. The Option fully vested on April 1, 2007 and shall expire on July 15, 2013.

9. The Option fully vested on January 1, 2008 and shall expire on April 18, 2014.

10. The Option was originally granted on February 1, 2006 and was re-granted on December 23, 2009 as part of the Issuer's option repricing. The Option fully vested on October 1, 2008 and shall expire on August 14, 2016.

11. The Option was originally granted on February 1, 2006 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 August 14, 2016.

12. 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.

13. 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.

14. 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 172 shares will vest monthly thereafter. The Option will fully vest on May 1, 2012 and shall expire on April 23, 2018.

15. 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, 2007 and shall expire on May 7, 2017.

16. 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. 7,842 shares subject to the Option were vested as the re-grant date and 253 shares vest monthly thereafter. The Option will fully vest on May 1, 2011 and shall expire on May 7, 2017.

17. 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 May 1, 2008 and shall expire on April 23, 2018.

18. 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 May 1, 2008 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 3rd day of February, 2011.

Signature: /s/ William M. Smith

William M. Smith