

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form S-8**REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933****Aspen Technology, Inc.**

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

04-2739697

(I.R.S. Employer Identification No.)

**200 Wheeler Road,
Burlington, Massachusetts**

(Address of principal executive offices)

01803

(Zip Code)

2010 Equity Incentive Plan

(Full title of the plan)

Mark E. Fusco**President and Chief Executive Officer****ASPEN TECHNOLOGY, INC.****200 Wheeler Road,****Burlington, Massachusetts 01803****(781) 221-6400**

(Name, address and telephone number, including area code, of agent for service)

With copies to:**Frederic G. Hammond**

Senior Vice President and General Counsel

ASPEN TECHNOLOGY, INC.

200 Wheeler Road,

Burlington, Massachusetts 01803

(781) 221-6400

Mark L. Johnson

COOLEY LLP

500 Boylston Street

Boston, Massachusetts 02116

(617) 937-2300

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. (Check one):

Large accelerated filer Accelerated filer Non-accelerated filer

(Do not check if a smaller reporting company)

Smaller reporting company **CALCULATION OF REGISTRATION FEE**

Title of securities to be registered	Amount to be registered(1)	Proposed maximum offering price per share(2)	Proposed maximum aggregate offering price(2)	Amount of registration fee
Common stock, \$0.10 par value per share	7,000,000 shares	\$ 10.13	\$ 70,910,000	\$ 5,056

(1) In accordance with Rule 416 under the Securities Act of 1933, as amended, this registration statement shall be deemed to cover any additional securities that may from time to time be offered or issued to prevent dilution resulting from stock splits, stock dividends or similar transactions.

(2) Estimated solely for the purpose of calculating the registration fee pursuant to Rules 457(c) and (h) under the Securities Act of 1933, as amended, and based upon the average of the high and low prices of the registrant's common stock as reported on The NASDAQ Global Select Market on September 28, 2010.

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

Item 1. Plan Information.

The information required by Item 1 is included in documents sent or given to participants in the plans covered by this registration statement pursuant to Rule 428(b)(1) of the Securities Act of 1933, as amended (the "Securities Act").

Item 2. Registrant Information and Employee Plan Annual Information.

The written statement required by Item 2 is included in documents sent or given to participants in the plans covered by this registration statement pursuant to Rule 428(b)(1) of the Securities Act.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents filed by the registrant with the Securities and Exchange Commission are incorporated by reference into this registration statement:

- (a) the registrant's latest annual report on Form 10-K filed pursuant to sections 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") that contains audited financial statements for the registrant's latest fiscal year for which such statements have been filed;
- (b) all other reports filed pursuant to sections 13(a) or 15(d) of the Exchange Act since the end of the fiscal year covered by the annual report referred to in (a) above; and
- (c) the description of the registrant's common stock, which is contained in a registration statement filed under the Exchange Act, including any amendment or report filed for the purpose of updating such description.

All reports and other documents subsequently filed by the registrant pursuant to sections 13(a), 13(c), 14 and 15(d) of the Exchange Act prior to the filing of a post-effective amendment which indicates that all securities offered have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference herein and to be a part of this registration statement from the date of the filing of such reports and documents.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel

Cooley LLP has opined as to the legality of the shares of common stock being offered by this registration statement on Form S-8.

Item 6. Indemnification of Directors and Officers.

Section 102 of the Delaware General Corporation Law allows a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in

violation of Delaware corporate law or obtained an improper personal benefit. The registrant has included such a provision in its Certificate of Incorporation, as amended (the "Certificate of Incorporation").

Section 145 of the General Corporation Law of Delaware provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against amounts paid and expenses incurred in connection with an action or proceeding to which he is or is threatened to be made a party by reason of such position, if such person shall have acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal proceeding, if such person had no reasonable cause to believe his conduct was unlawful; provided that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the adjudicating court determines that such indemnification is proper under the circumstances.

Article SEVENTH of the Certificate of Incorporation provides that no director of the registrant shall be personally liable for any monetary damages for any breach of fiduciary duty as a director, except to the extent that the Delaware General Corporation Law prohibits the elimination or limitation of liability of directors for breach of fiduciary duty.

Article EIGHTH of the Certificate of Incorporation provides that a director or officer of the registrant shall be indemnified by the registrant against:

- (a) all expenses (including attorneys' fees), judgments, fines and amounts paid in settlement incurred in connection with any litigation or other legal proceeding (other than an action by or in the right of the registrant) brought against him or her by virtue of his or her position as a director or officer

of the registrant if he or she acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the best interests of the registrant, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful; and

(b) all expenses (including attorneys' fees) and amounts paid in the settlement incurred in connection with any action by or in the right of the registrant brought against him or her by virtue of his or her position as a director or officer of the registrant if he or she acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the best interests of the registrant, except that no indemnification shall be made with respect to any matter as to which such person shall have been adjudged to be liable to the registrant, unless a court determines that, despite such adjudication but in view of all of the circumstances, he or she is entitled to indemnification of such expenses.

Notwithstanding the foregoing, to the extent that a director or officer has been successful, on the merits or otherwise, including the dismissal of an action without prejudice, he or she is required to be indemnified by the registrant against all expenses (including attorneys' fees) incurred in connection therewith. Expenses shall be advanced to a director or officer at his or her request, provided that he or she undertakes to repay the amount advanced if it is ultimately determined that he or she is not entitled to indemnification for such expenses.

Indemnification is required to be made unless the registrant determines that the applicable standard of conduct required for indemnification has not been met. In the event of a determination by the registrant that the director or officer did not meet the applicable standard of conduct required for indemnification, or if the registrant fails to make an indemnification payment within sixty days after such payment is claimed by such person, such person is permitted to petition the court to make an independent determination as to whether such person is entitled to indemnification. As a condition precedent to the right of indemnification, the director or officer must give the registrant notice of the action for which indemnity is sought and the registrant has the right to participate in such action or assume the defense thereof.

Article EIGHTH of the Certificate of Incorporation further provides that the indemnification provided therein is not exclusive, and provides that in the event that the Delaware General Corporation Law is amended to expand the indemnification permitted to directors or officers the registrant must indemnify those persons to fullest extent permitted by such law as so amended.

The registrant has purchased directors' and officers' liability insurance which would indemnify its directors and officers against damages arising out of certain kinds of claims which might be made against them based on their negligent acts or omissions while acting in their capacity as such.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits

Exhibit Number	Description of Exhibit	Filed Herewith	Filed Previously and Incorporated by Reference		
			Form	Date Filed with SEC	Exhibit Number
4.1	Certificate of Incorporation of Aspen Technology, Inc., as amended		8-K	August 22, 2003	4
4.2	By-Laws of Aspen Technology, Inc.		8-K	March 27, 1998	3.2
4.3	Specimen certificate for common stock of Aspen Technology, Inc.		8-A/A	June 12, 1998	4
5.1	Opinion of Cooley LLP	X			
23.1	Consent of KPMG LLP	X			
23.2	Consent of Cooley LLP (included in Exhibit 5.1)	X			
24.1	Power of Attorney of each of the directors and the principal executive, financial and accounting officers of Aspen Technology, Inc. (included on signature page)	X			
99.1	Aspen Technology, Inc. 2010 Equity Incentive Plan		8-K	April 21, 2010	10.1
99.2	Form of Terms and Conditions of Restricted Stock Unit Agreement Granted under Aspen Technology, Inc. 2010 Equity Incentive Plan		10-K	September 2, 2010	10.42
99.3	Form of Terms and Conditions of Stock Option Agreement Granted under Aspen Technology, Inc. 2010 Equity Incentive Plan		10-K	September 2, 2010	10.43

Item 9. Undertakings

1. The undersigned registrant hereby undertakes:

(a) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement.

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (a)(i) and (a)(ii) do not apply if the registration statement is on Form S-8, and the information required to be included in a post-effective amendment by those paragraphs is contained in

reports filed with or furnished to the Securities and Exchange Commission by the registrant pursuant to section 13 or section 15(d) of the Exchange Act that are incorporated by reference in the registration statement.

(b) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered herein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

2. The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to section 13(a) or section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered herein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
3. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Burlington, Commonwealth of Massachusetts, as of September 29, 2010.

ASPEN TECHNOLOGY, INC.

/s/ Mark E. Fusco

Mark E. Fusco

President and Chief Executive Officer

POWER OF ATTORNEY AND SIGNATURES

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Mark E. Fusco, Mark P. Sullivan and Frederic G. Hammond, and each or any one of them, as his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him or her, and in his or her name in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed below by the following persons on behalf of the registrant and in the capacities indicated, as of September 29, 2010.

Signature	Title
/s/ Mark E. Fusco Mark E. Fusco	President, Chief Executive Officer and Director <i>(Principal Executive Officer)</i>
/s/ Mark P. Sullivan Mark P. Sullivan	Executive Vice President and Chief Financial Officer <i>(Principal Financial and Accounting Officer)</i>
/s/ Stephen M. Jennings Stephen M. Jennings	Chairman of the Board of Directors
Donald P. Casey	Director

Gary E. Haroian	Director
/s/ Joan C. McArdle	
Joan C. McArdle	Director
/s/ David M. McKenna	
David M. McKenna	Director
/s/ Michael Pehl	
Michael Pehl	Director

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September 29, 2010

Aspen Technology, Inc.
200 Wheeler Road
Burlington, MA 01803

Re: 2010 Equity Incentive Plan

Ladies and Gentlemen:

You have requested our opinion with respect to certain matters in connection with the filing by Aspen Technology, Inc. (the "**Company**") of a Registration Statement on Form S-8 (the "**Registration Statement**") with the Securities and Exchange Commission covering the offering of up to 7,000,000 shares of the Company's Common Stock, \$0.10 par value per share (the "**Shares**"), pursuant to the Company's 2010 Equity Incentive Plan (the "**Plan**").

In connection with this letter, we have examined the Registration Statement and related Prospectus, the Plan, your Certificate of Incorporation and By-laws, as currently in effect, and such other documents, records, certificates, memoranda and other instruments as we deem necessary as a basis for the opinions expressed in this letter. We have assumed the genuineness and authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as copies thereof, and the due execution and delivery of all documents where due execution and delivery are a prerequisite to the effectiveness thereof.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares, when sold and issued in accordance with the Plan, the Registration Statement and related Prospectus, will be validly issued, fully paid and nonassessable (except as to shares issued pursuant to certain deferred payment arrangements, which will be fully paid and nonassessable when such deferred payments are made in full).

We consent to the filing of this opinion as an exhibit to the Registration Statement.

Very truly yours,

COOLEY LLP

By: /s/ Mark L. Johnson

Mark L. Johnson, Partner

500 BOYLSTON ST. 14TH FLOOR BOSTON, MA 02116 T: (617) 9372300 F: (617) 937-2400 WWW.COOLEY.COM

Consent of Independent Registered Public Accounting Firm

The Board of Directors
Aspen Technology Inc.:

We consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated September 1, 2010, with respect to the consolidated balance sheets of Aspen Technology Inc. as of June 30, 2010 and 2009, and the related consolidated statements of operations, stockholders' equity (deficit) and comprehensive income (loss) and cash flows for each of the years in the three-year period ended June 30, 2010, and the effectiveness of internal control over financial reporting as of June 30, 2010, incorporated by reference herein.

Our report dated September 1, 2010 on the effectiveness of internal control over financial reporting as of June 30, 2010 expresses our opinion that the Company did not maintain effective internal control over financial reporting as of June 30, 2010 because of the effects of material weaknesses on the achievement of the objectives of the control criteria and contains an explanatory paragraph that states that management has identified and included in its assessment the following categories of material weaknesses as of June 30, 2010: income tax accounting and disclosure, and recognition of professional services revenue.

s/s KPMG LLP

Boston, Massachusetts
September 29, 2010
