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# 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.)

**Ten Canal Park, Cambridge, Massachusetts**  
(Address of Principal Executive Offices)

**02141**  
(Zip Code)

**2001 Stock Option Plan**  
**1998 Employee Stock Purchase Plan**  
**Amended and Restated 1995 Director Stock Option Plan**  
(Full Title of the Plan)

**David L. McQuillin**  
**President and Chief Executive Officer**  
**Aspen Technology, Inc.**  
**Ten Canal Park**  
**Cambridge, Massachusetts 02141**  
(Name and Address of Agent For Service)

**(617) 949-1000**  
(Telephone Number, Including Area Code, of Agent For Service)

#### CALCULATION OF REGISTRATION FEE

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Title of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, \$0.10 par value per share (including the associated Preferred Stock Purchase Rights)	7,200,000 shares(2)	\$5.56(3)	\$40,032,000(3)	\$5,073

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- (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) Consists of (i) 3,840,000 shares issuable under the 2001 Stock Option Plan, as amended (ii) 3,000,000 shares issuable under the 1998 Employee Stock Purchase Plan, as amended and (iii) 360,000 shares issuable under the Amended and Restated 1995 Director Stock Option Plan, as amended.
- (3) Estimated solely for the purpose of calculating the registration fee pursuant to Rules 457(c) and 457(h) of 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 National Market on July 22, 2004.
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## PART STATEMENT OF INCORPORATION BY REFERENCE

This registration statement on Form S-8 is filed to register the offer and sale of an additional (i) 3,840,000 shares of the registrant's common stock, \$.10 par value per share, to be issued under the registrant's 2001 Stock Option Plan, as amended, (ii) 3,000,000 shares of the registrant's common stock to be issued under the registrant's 1998 Employee Stock Purchase Plan, as amended and (iii) 360,000 shares of the registrant's common stock to be issued under the Amended and Restated 1995 Director Stock Option Plan, as amended. This registration statement incorporates by reference the contents of (i) the registration statement on Form S-8, File No. 333-71872, filed by the registrant on October 19, 2001, relating to the registrant's 2001 Stock Option Plan, as amended (ii) the registration statements on Form S-8, File Nos. 333-44575 and 333-71874, filed by the registrant on January 20, 1998 and October 19, 2001, respectively, relating to the registrant's 1998 Employee Stock Purchase Plan, as amended and (iii) the registration statements on Form S-8, File Nos. 333-11651 and 333-42538, filed by the registrant on September 9, 1996 and July 28, 2000, respectively, relating to the registrant's Amended and Restated 1995 Director Stock Option Plan, as amended.

### Item 5. Interests of Named Experts and Counsel.

Wilmer Cutler Pickering Hale and Dorr LLP has opined as to the legality of the securities being offered by this registration statement.

### Item 8. Exhibits.

Number	Description
4.1(1)	Certificate of Incorporation of Aspen Technology, Inc., as amended
4.2(2)	By-Laws of Aspen Technology, Inc.
4.3(3)	Specimen Certificate for Shares of Aspen Technology, Inc.'s common stock, \$.10 par value.
4.4(2)	Rights Agreement dated as of March 12, 1998 between Aspen Technology, Inc. and American Stock Transfer and Trust Company, as Rights Agent, including related forms of the following: (a) Certificate of Designation of Series A Participating Cumulative Preferred Stock of Aspen Technology, Inc. and (b) Right Certificate
4.5(4)	Amendment No. 1 dated as of October 26, 2001 to Rights Agreement dated as of March 12, 1998 between Aspen Technology, Inc. and American Stock Transfer & Trust Company, as Rights Agent.
4.6(5)	Amendment No. 2 dated as of February 6, 2002 to Rights Agreement dated as of March 12, 1998 between Aspen Technology, Inc. and American Stock Transfer & Trust Company.
4.7(6)	Amendment No. 3 dated as of March 19, 2002 to Rights Agreement dated as of March 12, 1998 between Aspen Technology, Inc. and American Stock Transfer & Trust Company.
4.8(7)	Amendment No. 4 dated as of May 9, 2002 to Rights Agreement dated as of March 17, 1998 between Aspen Technology, Inc. and American Stock Transfer & Trust Company, as Rights Agent.
4.9(8)	Amendment No. 5 dated as of June 1, 2003 to Rights Agreement dated as of March 17, 1998 between Aspen Technology, Inc. and American Stock Transfer & Trust Company, as Rights Agent.
4.10(9)	Indenture dated as of June 17, 1998 between Aspen Technology, Inc. and The Chase Manhattan Bank, as trustee, with respect to up to \$86,250,000 principal amount of 5 <sup>1</sup> / <sub>4</sub> % Convertible Subordinated Debentures due June 15, 2005 of Aspen Technology, Inc.
4.11(9)	Form of 5 <sup>1</sup> / <sub>4</sub> % Convertible Subordinated Debentures due June 15, 2005 of Aspen Technology, Inc. (included in Sections 2.2, 2.3 and 2.4 of the Indenture).

4.12(10)	Form of Warrant of Aspen Technology, Inc. dated as of May 9, 2002.
4.13(1)	Form of WD Common Stock Purchase Warrant of Aspen Technology, Inc. dated as of August 14, 2003.
4.14(1)	Form of WB Common Stock Purchase Warrant of Aspen Technology, Inc. dated as of August 14, 2003.
5	Opinion of Wilmer Cutler Pickering Hale and Dorr LLP
23.1	Consent of Wilmer Cutler Pickering Hale and Dorr LLP (included in Exhibit 5)
23.2	Consent of Deloitte & Touche LLP
23.3	Notice Regarding Consent of Arthur Andersen LLP
24	Power of attorney (included on the signature pages of this registration statement)

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- (1) Previously filed as an exhibit to the Current Report on Form 8-K of Aspen Technology, Inc. dated August 21, 2003 (filed on August 22, 2003), and incorporated herein by reference.
- (2) Previously filed as an exhibit to the Current Report on Form 8-K of Aspen Technology, Inc. dated March 12, 1998 (filed on March 27, 1998), and incorporated herein by reference.
- (3) Previously filed as an exhibit to Amendment No. 1 to the Registration Statement on Form 8-A of Aspen Technology, Inc. (filed on June 12, 1998), and incorporated herein by reference.
- (4) Previously filed as an exhibit to Amendment No. 2 to the Registration Statement on Form 8-A of Aspen Technology, Inc. filed on November 8, 2001, and incorporated herein by reference.
- (5) Previously filed as an exhibit to Amendment No. 3 to the Registration Statement on Form 8-A of Aspen Technology, Inc. filed on February 12, 2002, and incorporated herein by reference.
- (6) Previously filed as an exhibit to Amendment No. 4 to the Registration Statement on Form 8-A of Aspen Technology, Inc. filed on March 20, 2002, and incorporated herein by reference.
- (7) Previously filed as an exhibit to Amendment No. 5 to the Registration Statement on Form 8-A of Aspen Technology, Inc. filed on May 31, 2002, and incorporated herein by reference.
- (8) Previously filed as an exhibit to Amendment No. 6 to Form 8-A of Aspen Technology, Inc. filed on June 2, 2003, and incorporated herein by reference.
- (9) Previously filed as an exhibit to the Current Report on Form 8-K of Aspen Technology, Inc. dated June 17, 1998 (filed on June 19, 1998), and incorporated herein by reference.
- (10) Previously filed as an exhibit to the Current Report on Form 8-K of Aspen Technology, Inc. dated June 5, 2002 (filed on June 7, 2002), and incorporated herein by reference.

**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 Cambridge, Massachusetts as of July 23, 2004.

**ASPEN TECHNOLOGY, INC.**

By: /s/ DAVID L. MCQUILLIN

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David L. McQuillin  
President and Chief Executive Officer

**POWER OF ATTORNEY AND SIGNATURES**

We, the undersigned officers and directors of Aspen Technology, Inc., hereby severally constitute and appoint David L. McQuillin, Charles F. Kane, and Mark L. Johnson, and each of them singly, our true and lawful attorneys with full power to them, and each of them singly, to sign for us and in our names in the capacities indicated below, the registration statement on Form S-8 filed herewith and any and all subsequent amendments to said registration statement, and generally to do all such things in our names and on our behalf in our capacities as officers and directors to enable Aspen Technology, Inc. to comply with the provisions of the Securities Act of 1933, as amended, and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorneys, or any of them, to said registration statement and any and all amendments thereto.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities indicated as of July 23, 2004.

Signature	Title
<hr/> /s/ DAVID L. MCQUILLIN <hr/> David L. McQuillin	President and Chief Executive Officer <i>(principal executive officer)</i>
<hr/> /s/ CHARLES F. KANE <hr/> Charles F. Kane	Senior Vice President and Chief Financial Officer <i>(principal financial and accounting officer)</i>
<hr/> /s/ LAWRENCE B. EVANS <hr/> Lawrence B. Evans	Chairman of the Board of Directors
<hr/> /s/ DONALD P. CASEY <hr/> Donald P. Casey	Director

/s/ MARK FUSCO

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Director

Mark Fusco

/s/ GARY HAROIAN

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Director

Gary Haroian

/s/ STEPHEN M. JENNINGS

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Director

Stephen M. Jennings

/s/ DOUGLAS KINGSLEY

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Director

Douglas Kingsley

/s/ JOAN C. MCARDLE

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Director

Joan C. McArdle

/s/ MICHAEL PEHL

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Director

Michael Pehl

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WILMER CUTLER PICKERING  
HALE AND DORR LLP

July 23, 2004

Aspen Technology, Inc.  
Ten Canal Park  
Cambridge, Massachusetts 02141

Re: 2001 Stock Option Plan  
1998 Employee Stock Purchase Plan  
1995 Director Stock Option Plan

Ladies and Gentlemen:

We have assisted in the preparation of a Registration Statement on Form S-8 (the "Registration Statement") to be filed with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), relating to an aggregate of 7,200,000 shares of common stock, \$0.10 par value per share (the "Shares"), of Aspen Technology, Inc., a Delaware corporation (the "Company"), issuable under the Company's 2001 Stock Option Plan, as amended, 1998 Employee Stock Purchase Plan, as amended, and Amended and Restated 1995 Director Stock Option Plan, as amended (collectively, the "Plans").

We have examined the Certificate of Incorporation and By-Laws of the Company, each as amended and restated to date, and originals, or copies certified to our satisfaction, of all pertinent records of the meetings of the directors and stockholders of the Company, the Registration Statement and such other documents relating to the Company as we have deemed material for the purposes of this opinion.

In our examination of the foregoing documents, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified, photostatic or other copies, the authenticity of the originals of any such documents and the legal competence of all signatories to such documents.

We assume that the appropriate action will be taken, prior to the offer and sale of the Shares in accordance with the Plans, to register and qualify the Shares for sale under all applicable state securities or "blue sky" laws.

We express no opinion herein as to the laws of any state or jurisdiction other than the state laws of The Commonwealth of Massachusetts, the General Corporation Law of the State of Delaware and the federal laws of the United States of America.

It is understood that this opinion is to be used only in connection with the offer and sale of the Shares while the Registration Statement is in effect.

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters.

Based on the foregoing, we are of the opinion that the Shares have been duly authorized for issuance and, when the Shares are issued and paid for in accordance with the terms and conditions of the Plans, the Shares will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion with the Commission in connection with the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act. In giving such consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission.

Very truly yours,

/s/ Wilmer Cutler Pickering Hale and Dorr LLP

WILMER CUTLER PICKERING HALE AND DORR LLP

BALTIMORE    BERLIN    BOSTON    BRUSSELS    LONDON    MUNICH  
NEW YORK    NORTHERN VIRGINIA    OXFORD    PRINCETON    WALTHAM    WASHINGTON

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QuickLinks

[Exhibit 5](#)

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Directors and Stockholders  
of Aspen Technology, Inc.  
Cambridge, Massachusetts

We consent to the incorporation by reference in this Registration Statement of Aspen Technology, Inc. (the "Company") on Form S-8 of our report dated September 29, 2003 (which expresses an unqualified opinion and includes explanatory paragraphs referring to the Company's change in method of accounting for goodwill and intangible assets and the reclassification of reimbursements from customers for out-of-pocket expenses), appearing in the Annual Report on Form 10-K of Aspen Technology, Inc. for the year ended June 30, 2003.

/s/ DELOITTE & TOUCHE LLP  
Boston, Massachusetts  
July 23, 2004

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[Exhibit 23.2](#)

[CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM](#)

**NOTICE REGARDING CONSENT OF ARTHUR ANDERSEN LLP**

Section 11(a) of the Securities Act of 1933, as amended (the "Securities Act"), provides that if part of a registration statement at the time it becomes effective contains an untrue statement of a material fact, or omits a material fact required to be stated therein or necessary to make the statements therein not misleading, any person acquiring a security pursuant to such registration statement (unless it is proved that at the time of such acquisition such person knew of such untruth or omission) may assert a claim against, among others, an accountant who has consented to be named as having certified any part of the registration statement or as having prepared any report for use in connection with the registration statement.

On June 17, 2002, the board of directors of Aspen Technology, Inc. (the "Company"), upon the recommendation of its Audit Committee, dismissed Arthur Andersen LLP as the Company's independent public accountants and engaged Deloitte & Touche LLP, effective immediately, to serve as its independent public accountants for the fiscal year ending on June 30, 2002. For additional information, see the Company's Current Report on Form 8-K dated June 17, 2002 and filed with the Securities and Exchange Commission on June 18, 2002. The Company has been unable to obtain Andersen's written consent to the incorporation by reference into this registration statement of Andersen's audit report with respect to the Company's consolidated financial statements for the year ended December 31, 2001.

Under these circumstances, Rule 437a under the Securities Act permits the Company to file this registration statement, which incorporates by reference Andersen's audit report referred to above, without a written consent from Andersen. The absence of such consent may limit recovery by investors on certain claims. In particular, and without limitation, investors may not be able to assert claims against Andersen under Section 11(a) of the Securities Act for any untrue statement of a material fact contained in the financial statements audited by Andersen or for any omission of a material fact required to be stated therein. Accordingly, you would be unable to assert a claim against Andersen under Section 11(a) of the Securities Act because it has not consented to the incorporation by reference of its previously issued report in this registration statement.

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QuickLinks

[Exhibit 23.3](#)

[NOTICE REGARDING CONSENT OF ARTHUR ANDERSEN LLP](#)