

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM 20-F/A

(Amendment No. 1)

REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2008

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ **to** _____

OR

SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of event requiring this shell company report

Commission file number: 000-51196

AIXTRON Aktiengesellschaft

(Exact name of Registrant as specified in its charter)

Federal Republic of Germany

(Jurisdiction of incorporation or organization)

Kaiserstr. 98
52134 Herzogenrath
Federal Republic of Germany

(Address of principal executive offices)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

**Ordinary shares, no par value (only in connection with the listing of
its American Depositary Shares on The NASDAQ Stock Market, LLC)**

(Title of Class)

Securities registered or to be registered pursuant to Section 12(g) of the Act: **None**

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: **None**

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of December 31, 2008:
90,894,616 ordinary shares, no par value.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days.

Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of accelerated filer and large accelerated filer in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing.

U.S. GAAP

International Financial Reporting Standards as issued
by the International Accounting Standards Board

Other

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.

Item 17 Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes No

EXPLANATORY NOTE

This Form 20-F/A (the “Amended Filing”) is being filed by Aixtron Aktiengesellschaft (the “Company” or “AIXTRON”) to amend its Annual Report on Form 20-F for the year ended December 31, 2008 (the “Original Filing”), filed with the Securities and Exchange Commission (the “SEC”) on March 12, 2009, to set forth Item 15 and Item 19 to replace Item 15 and Item 19 in their entirety, respectively, in the Original Filing. All other items remain unchanged from the Original Filing.

As disclosed below, Item 15 of this Amended Filing is filed to (i) include Deloitte & Touche GmbH’s attestation report on the effectiveness of the Company’s internal controls over financial reporting, which was inadvertently omitted from the Original Filing, (ii) revise the Company’s conclusion regarding the effectiveness of its disclosure controls and procedures as of the end of the period covered by this report, (iii) remove the definition of disclosure controls and procedures in the Company’s disclosure regarding its officers’ conclusions about the effectiveness of the Company’s disclosure controls and procedures and (iv) remove the definition of internal control over financial reporting in the Company’s disclosure regarding its conclusion about the effectiveness of its internal control over financial reporting.

As disclosed below, Item 19 of this Amended Filing is filed to update the Section 302 certifications.

Except as otherwise stated herein, no other information contained in the Original Filing has been updated by this Amended Filing and no disclosures have been updated to reflect events that occurred at a later date. This Amendment should be read in conjunction with the Company’s SEC filings made subsequent to the Original Filing.

Item 15: Controls and Procedures

Disclosure Controls and Procedures

Management of AIXTRON conducted an evaluation, under the supervision and with the participation of AIXTRON's Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of AIXTRON's disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act).

Based on such evaluation, AIXTRON's Chief Executive Officer Paul Hyland and Chief Financial Officer Wolfgang Breme had concluded that disclosure controls and procedures were effective. However, in light of the fact that AIXTRON's Management inadvertently omitted the required attestation report on the effectiveness of the Company's internal controls over financial reporting issued by Deloitte & Touche GmbH from the Original Filing, the Company is hereby revising its conclusion regarding its disclosure controls and procedures as of the end of the period covered by this report and instead is concluding that those disclosure controls and procedures were not effective at December 31, 2008.

The Company has remedied this failure in the effectiveness of its disclosure controls and procedures by filing the required attestation report on the effectiveness of the Company's internal controls over financial reporting in the Amended Filing. The Company has also implemented additional controls and procedures designed to ensure that the disclosures provided by the Company meet the then-current requirements of the applicable filing made under the Exchange Act.

Management's Report on Internal Control over Financial Reporting

AIXTRON's Management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) under the Exchange Act, for AIXTRON. Under the supervision and with the participation of AIXTRON's Chief Executive Officer and Chief Financial Officer, AIXTRON's Management conducted an evaluation of the effectiveness of AIXTRON's internal control over financial reporting based upon the framework in "Internal Control—Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission as of the end of the period covered by this report.

Based on that evaluation, Management has concluded that AIXTRON's internal control over financial reporting was effective as of December 31, 2008.

Deloitte & Touche GmbH, an independent registered public accounting firm, has audited the Consolidated Financial Statements included in the annual report on Form 20-F and, as part of the audit, has issued an attestation report, included herein, on the effectiveness of AIXTRON's internal control over financial reporting.

Attestation Report of the Registered Public Accounting Firm

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To The Supervisory Board

AIXTRON AG

Aachen, Germany

We have audited the internal control over financial reporting of AIXTRON Aktiengesellschaft and subsidiaries (the “Company”) as of December 31, 2008, based on the criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management Report On Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company’s internal control over financial reporting is a process designed by, or under the supervision of, the company’s principal executive and principal financial officers, or persons performing similar functions, and effected by the company’s board of directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2008, based on the criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements as of and for the year ended December 31, 2008 of the Company and our report dated March 11, 2009 expressed an unqualified opinion on those financial statements.

/s/ Deloitte & Touche GmbH Wirtschaftsprüfungsgesellschaft

Deloitte & Touche GmbH

Wirtschaftsprüfungsgesellschaft

Duesseldorf, Germany, March 11, 2009

Changes in Internal Control over Financial Reporting

During the year ended December 31, 2008 there have been no changes in our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations of Disclosure Controls and Procedures in Internal Control over Financial Reporting

It should be noted that any system of controls, however well-designed and operated, can provide only reasonable, and not absolute, assurance that the objectives of the system will be met. In addition, the design of any control system is based in part upon certain assumptions about the likelihood of future events.

Item 19: Exhibits

<u>Exhibit Number</u>	<u>Description of Exhibit</u>
1.1	Articles of Association (<i>Satzung</i>) as amended May 14, 2008.*
4.2	Manufacturing License and Technical Services Agreement, dated as of August 10, 1989, between AIXTRON Aktiengesellschaft and Laboratoires D'Electronique Philips (incorporated by reference to Exhibit 10.2 to Form F-4, dated February 8, 2005, File No. 333-122624).
4.3	Exclusive Patent and Know—How License Agreement among AIXTRON Aktiengesellschaft, Centre National de la Recherche Scientifique and the Institut National Polytechnique de Grenoble (incorporated by reference to Exhibit 10.3 to Form F-4, dated February 8, 2005, File No. 333-122624).
4.4	Contract between AIXTRON AG and Mr. Paul Hyland, effective April 1, 2002. (English translation; incorporated by reference to Exhibit 4.4 to Form 20-F, dated June 22, 2006, File No. 000-51196).
4.5	Amendment to contract between AIXTRON AG and Mr. Paul Hyland, dated October 20, 2004. (English translation; incorporated by reference to Exhibit 4.5 to Form 20-F, dated June 22, 2006, File No. 000-51196).
4.6	Contract between AIXTRON AG and Mr. Wolfgang Breme, effective April 1, 2005. (English translation; incorporated by reference to Exhibit 4.5 to Form 20-F, dated March 15, 2007, File No. 000-51196).
4.7	Contract between AIXTRON AG and Dr. Bernd Schulte, effective April 1, 2002. (English translation; incorporated by reference to Exhibit 4.7 to Form 20-F, dated June 22, 2006, File No. 000-51196).
4.8	Amendment to contract between AIXTRON AG and Dr. Bernd Schulte, dated October 20, 2004. (Incorporated by reference to Exhibit 4.8 to Form 20-F, dated June 22, 2006, File No. 000-51196).
8.1	List of Subsidiaries (incorporated by reference to the list of significant subsidiaries set forth in this report under the caption "Item 4. Information on the Company—Organizational Structure.")*
11.1	Code of Ethics, revised in 2007 (Incorporated by reference to Exhibit 11.1 to Form 20-F, dated

March 13, 2008, File No. 000-51196).

- 12.1 Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.**
- 12.2 Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.**
- 13.1 Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.*
- 14.1 Consent of Deloitte & Touche GmbH Wirtschaftsprüfungsgesellschaft.*

* Previously filed as an exhibit to the Original Filing.

** Filed herewith.

Exhibit 12.1

Section 302 Certification

I, Paul Hyland certify that:

1. I have reviewed this annual report on Form 20-F (as amended by this Form 20-F/A Amendment No. 1) for the fiscal year ended December 31, 2008 of AIXTRON Aktiengesellschaft (the "Company");
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. The Company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal controls over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the Company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the Company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting; and
4. The Company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company's auditors and the Audit Committee of the Company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal control over financial reporting.

Date: June 21, 2010

/s/ PAUL HYLAND

Name: **Paul Hyland**

Title: **Chairman, President and Chief Executive Officer**
