

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE TO
TENDER OFFER STATEMENT UNDER SECTION 14(d)(1) OR 13(e)(1) OF THE
SECURITIES EXCHANGE ACT OF 1934
(Amendment No. 3)

Applied Signal Technology, Inc.

(Name of Subject Company)

RN Acquisition Company

(Offeror)

a wholly owned subsidiary of

Raytheon Company

(Parent of Offeror)

COMMON STOCK, WITHOUT PAR VALUE

(Title of Class of Securities)

038237103

(CUSIP Number of Class of Securities)

Jay B. Stephens, Esq.

Raytheon Company

870 Winter Street

Waltham, MA 02451

(781) 522-3000

(Name, address, and telephone numbers of person authorized to receive notices and communications on behalf of filing persons)

Copies to:

Gary E. Thompson, Esq.

Hunton & Williams LLP

951 E. Byrd Street

Riverfront Plaza, East Tower

Richmond, VA 23219

(804) 788-8787

CALCULATION OF FILING FEE

Transaction Valuation(1)	Amount of Filing Fee(2)
\$559,706,712.00	\$64,981.95

- (1) Estimated for purposes of calculating the filing fee only. This amount is determined by multiplying 14,729,124 shares of Applied Signal Technology, Inc. common stock (representing the number of shares, including shares of common stock outstanding and in-the-money options) by \$38.00 per share, which is the offer price.
- (2) The filing fee was calculated in accordance with Rule 0-11 under the Securities Exchange Act of 1934 and Fee Rate Advisory #5 for fiscal year 2011, issued December 22, 2010, by multiplying the transaction value by .0001161.
- Check the box if any part of the fee is offset as provided by Rule 0-11(a)(2) and identify the filing with which the offsetting fee was previously paid. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.
- Check the box if the filing relates solely to preliminary communications made before the commencement of a tender offer.

Amount Previously Paid: \$64,981.95
Form of Registration No.: Schedule TO

Filing Party: RN Acquisition Company
Date Filed: December 30, 2010

Check the appropriate boxes below to designate any transactions to which the statement relates:

- Third-party offer subject to Rule 14d-1.
 Issuer tender offer subject to Rule 13e-4.
 Going-private transactions subject to Rule 13e-3.
 Amendment to Schedule 13D under Rule 13d-2.

Check the following box if the filing is a final amendment reporting the results of the tender offer:

This Amendment No. 3 amends and supplements the Tender Offer Statement on Schedule TO (as amended, the “Schedule TO”) relating to the offer by RN Acquisition Company, a California corporation (the “Purchaser”), and a wholly owned subsidiary of Raytheon Company, a Delaware corporation (“Parent”), to purchase all of the outstanding shares of common stock, without par value (the “Shares”), of Applied Signal Technology, Inc., a California corporation, at a purchase price of \$38.00 per Share, net to the seller in cash, without interest thereon and less any applicable withholding taxes, upon the terms and subject to the conditions set forth in the Offer to Purchase, dated December 30, 2010 (which, together with any amendments and supplements thereto, collectively constitute the “Offer to Purchase”), and in the related letter of transmittal, copies of which are attached to the Schedule TO as Exhibits (a)(1)(A) and (a)(1)(B), respectively (and which, together with the Offer to Purchase, constitute the “Offer”).

All of the information set forth in the Offer to Purchase is incorporated by reference herein in response to Items 1 through 9 and Item 11 of the Schedule TO, and is supplemented by the information specifically provided for in this Amendment No. 3. Capitalized terms used but not otherwise defined herein have the meanings ascribed to such terms in the Schedule TO.

Item 11. Additional Information.

Item 11 of the Schedule TO, and the Offer to Purchase, to the extent incorporated by reference therein, are hereby amended and supplemented as set forth below.

The second paragraph in the subsection titled “Antitrust Compliance” in Section 16 — “Certain Legal Matters; Regulatory Approvals” of the Offer to Purchase is deleted in its entirety and replaced with the following paragraph:

“Under the HSR Act, our purchase of Shares in the Offer may not be completed until the expiration of a 15 calendar day waiting period following the filing by Parent, as the ultimate parent entity of the Purchaser, of a Premerger Notification and Report Form concerning the Offer with the FTC and the Antitrust Division, unless the waiting period is earlier terminated by the FTC and the Antitrust Division. Parent filed a Premerger Notification and Report Form with the FTC and the Antitrust Division for review in connection with the Offer and the Merger on January 3, 2011. AST filed a Premerger Notification and Report Form with the FTC and the Antitrust Division for review in connection with the Offer and the Merger on January 7, 2011. On January 18, 2011, Parent voluntarily withdrew its Premerger Notification and Report Form and refiled the Premerger Notification and Report Form with the FTC and the Antitrust Division in order to begin a new waiting period under the HSR Act and provide the FTC and the Antitrust Division with additional time to review its acquisition of AST. As a result of such voluntary withdrawal and refile, the initial waiting period applicable to the purchase of Shares will now expire on February 2, 2011, unless the waiting period is earlier terminated by the FTC and the Antitrust Division or extended by a request from the FTC or the Antitrust Division for additional information or documentary material from Parent prior to that time. The Offer is currently scheduled to expire prior to the end of the waiting period. If, as of the Expiration Date, the waiting period has not been earlier terminated by the FTC and the Antitrust Division, Parent and the Purchaser expect to extend the Offer so that it expires concurrently with or after the waiting period. If within the 15 calendar day waiting period either the FTC or the Antitrust Division issues a request for additional information and documentary material (a “Second Request”), the waiting period with respect to the Offer and the Merger would be extended until 10 calendar days following the date of substantial compliance by Parent with that request, unless the FTC or the Antitrust Division terminates the additional waiting period before its expiration. After the expiration of the 10 calendar day waiting period, the waiting period could be extended only by court order or with Parent’s consent. In practice, complying with a Second Request can take a significant period of time. Although AST is required to file certain information and documentary material with the FTC and the Antitrust Division in connection with the Offer, neither AST’s failure to make those filings nor a request for additional documents and information issued to AST by the FTC or the Antitrust Division will extend the waiting period with respect to the purchase of Shares in the Offer and the Merger. The Merger will not require an additional filing under the HSR Act if the Purchaser owns more than 50% of the outstanding Shares at the time of the Merger or if the Merger occurs within one year after the HSR Act waiting period applicable to the Offer expires or is terminated.”

SIGNATURE

After due inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

RN Acquisition Company

By: _____ /s/ KATHRYN GILCHRIST SIMPSON
Name: **Kathryn Gilchrist Simpson**
Title: **President**

Dated: January 18, 2011

Raytheon Company

By: _____ /s/ JAY B. STEPHENS
Name: **Jay B. Stephens**
Title: **Senior Vice President, General Counsel and Secretary**

Dated: January 18, 2011

Exhibit Index

Exhibit No.	Description
(a)(1)(A)	Offer to Purchase, dated December 30, 2010*
(a)(1)(B)	Form of Letter of Transmittal (including Guidelines for Certification of Taxpayer Identification Number (TIN) on Substitute Form W-9)*
(a)(1)(C)	Form of Notice of Guaranteed Delivery*
(a)(1)(D)	Form of Letter to Brokers, Dealers, Commercial Banks, Trust Companies and Other Nominees*
(a)(1)(E)	Form of Letter to Clients for use by Brokers, Dealers, Commercial Banks, Trust Companies and Other Nominees*
(a)(1)(F)	Summary Advertisement as published in <i>The Wall Street Journal</i> on December 30, 2010*
(a)(1)(G)	Press Release issued by Raytheon Company, dated December 20, 2010 (incorporated by reference to Exhibit 99.1 to the Form 8-K filed by Raytheon Company with the Securities and Exchange Commission on December 20, 2010)*
(a)(1)(H)	Presentation by Raytheon Company distributed to the employees of Applied Signal Technology, Inc. on December 20, 2010 (incorporated by reference to Exhibit 99.2 to the Form 8-K filed by Raytheon Company with the Securities and Exchange Commission on December 20, 2010)*
(a)(1)(I)	Press Release issued by Raytheon Company, dated December 30, 2010, announcing the commencement of the Offer*
(a)(1)(J)	Complaint filed in the Superior Court of the State of California, County of Santa Clara, captioned <i>Jarackas v. Applied Signal Technology, Inc., et al.</i> (incorporated by reference to Exhibit (a)(14) to Amendment No. 2 to the Schedule 14D-9 filed by Applied Signal Technology, Inc. with the Securities and Exchange Commission on January 13, 2011)*
(d)(1)	Agreement and Plan of Merger, dated as of December 18, 2010, among Raytheon Company, RN Acquisition Company and Applied Signal Technology, Inc. (incorporated by reference to Exhibit 2.1 to the Form 8-K filed by Applied Signal Technology, Inc. with the Securities and Exchange Commission on December 20, 2010)*
(d)(2)	Tender and Voting Agreement, dated as of December 18, 2010, by and among Raytheon Company, RN Acquisition Company and Milton E. Cooper*
(d)(3)	Tender and Voting Agreement, dated as of December 18, 2010, by and among Raytheon Company, RN Acquisition Company and John P. Devine*
(d)(4)	Tender and Voting Agreement, dated as of December 18, 2010, by and among Raytheon Company, RN Acquisition Company and David D. Elliman (and certain affiliates)*
(d)(5)	Tender and Voting Agreement, dated as of December 18, 2010, by and among Raytheon Company, RN Acquisition Company and Marie S. Minton*
(d)(6)	Tender and Voting Agreement, dated as of December 18, 2010, by and among Raytheon Company, RN Acquisition Company and Robert J. Richardson*
(d)(7)	Tender and Voting Agreement, dated as of December 18, 2010, by and among Raytheon Company, RN Acquisition Company and Dr. John Treichler (and certain affiliates)*
(d)(8)	Tender and Voting Agreement, dated as of December 18, 2010, by and among Raytheon Company, RN Acquisition Company and William B. Van Vleet III*
(d)(9)	Mutual Nondisclosure Agreement, dated as of October 19, 2010, between Applied Signal Technology, Inc. and Raytheon Company*

* Previously filed.