

Form PTO-1595 (Rev. 07/03)  
OMB No. 0651-0027 (exp. 6/30/2008)

U.S. DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office

## RECORDATION FORM COVER SHEET PATENTS ONLY

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

**1. Name of conveying party(ies)**  
Thiokol Propulsion Corp.

Additional name(s) of conveying party(ies) attached?  Yes  No

**2. Name and address of receiving party(ies)**  
Name: Alliant Techsystems Inc.  
Internal Address: \_\_\_\_\_  
\_\_\_\_\_  
Street Address: 5050 Lincoln Drive  
\_\_\_\_\_  
City: Edina  
State: MN  
Country: U.S.A. Zip: 55436

Additional name(s) & address(es) attached?  Yes  No

**3. Nature of conveyance/Execution Date(s):**  
Execution Date(s) September 7, 2001

Assignment  Merger  
 Security Agreement  Change of Name  
 Joint Research Agreement  
 Government Interest Assignment  
 Executive Order 9424, Confirmatory License  
 Other \_\_\_\_\_

**4. Application or patent number(s):**  This document is being filed together with a new application.

A. Patent Application No.(s) \_\_\_\_\_  
B. Patent No.(s) 6,787,586

Additional numbers attached?  Yes  No

**5. Name and address to whom correspondence concerning document should be mailed:**  
Name: Deborah J. Ledbeter  
Internal Address: MN01-2070  
\_\_\_\_\_  
Street Address: 5050 Lincoln Dr.  
\_\_\_\_\_  
City: Edina  
State: MN Zip: 55436  
Phone Number: (952) 351 - 2865  
Fax Number: (952) 351 - 3036  
Email Address: Deborah.Ledbeter@ATK.COM

**6. Total number of applications and patents involved:** 1

**7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00**

Authorized to be charged by credit card  
 Authorized to be charged to deposit account  
 Enclosed  
 None required (government interest not affecting title)

**8. Payment Information**

a. Credit Card Last 4 Numbers \_\_\_\_\_  
Expiration Date \_\_\_\_\_

b. Deposit Account Number 01-0461  
Authorized User Name Deborah Ledbeter

**9. Signature:** Laura Ryan 06/21/06  
Signature Date

Name of Person Signing Total number of pages including cover sheet, attachments, and documents: 13

Documents to be recorded (including cover sheet) should be faxed to (671) 273-0140, or mailed to:  
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1460, Alexandria, V.A. 22313-1460

C/H \$-40.00 010481 6787586

## PATENT RIGHTS ASSIGNMENT

This Assignment is made and executed by Thiokol Propulsion Corp., a Delaware corporation with its principal place of business located at 9160 N. Highway 83, P.O. Box 707, Brigham City, Utah 84302-0707 (hereinafter "Assignor"), to and in favor of Alliant Techsystems Inc., a Delaware corporation having its principal place of business at 5050 Lincoln Drive, Edina, MN 55436 (hereinafter "Assignee").

Whereas Assignor previously received the entire right, title and interest in and to all patent applications listed in Attachment A attached hereto and patents listed in Attachment B attached hereto; and

Whereas Assignor desires to assign his entire right, title and interest in and to all patents and patent applications, to Assignee for valuable consideration; and

Whereas Assignee has provided such valuable consideration to Assignor;

Accordingly, the parties agree as follows:

1. Assignor hereby conveys and assigns to Assignee Assignor's entire right, title and interest in and to the Patents and Patent Applications and the inventions disclosed in them, including all continuation, continuation-in-part and divisional applications and all continuing prosecution applications based in whole or in part on the Patents and Patent Applications, and including all patents and reissues resulting from the Patent Applications.
2. Assignor hereby assigns to Assignee Assignor's entire right, title and interest in and to all counterparts to the Patents and Patent Applications that have been or may be filed outside the United States, whether pursued as a patent, an inventor's certificate, a utility model or the like, including all rights of priority based on the Patents and Patent Applications, further including all continuation, continuation-in-part and divisional applications and all continuing prosecution applications based in whole or in part on the non-U.S. counterparts, and still further including all patents, inventor's certificates, utility models and reissues based upon or resulting from any of the non-U.S. counterparts.
3. Assignor hereby grants to Assignee the sole and exclusive right to prosecute the Patents and Patent Applications and all related patents and applications as described in Paragraphs 1 and 2 above, as well as any opposition proceedings, reissue applications, reexaminations, and nullity or invalidity proceedings. Assignor authorizes all governmental bodies having the power to issue patents, reissues, inventor's certificates or utility models to issue a patent, reissue, inventor's certificate or utility model based on

1082-001

the Patents and Patent Applications or any related applications as described in Paragraphs 1 and 2 above in the name of Assignee.

4. Assignor agrees upon request and without further consideration, but at Assignee's expense: (a) to assist Assignee in prosecuting the Patents and Patent Applications and all related applications as described in Paragraphs 1 through 3 above, as well as opposition proceedings, reissue applications, reexaminations, and nullity or invalidity proceedings; (b) to provide Assignee with information concerning the Patents and Patent Applications to enable Assignee to obtain, secure and protect the rights granted under this Assignment; (c) to sign papers, take oaths and testify in legal proceedings to enable Assignee to obtain, secure and protect the rights granted under this Assignment; and (d) to perform all acts reasonably necessary to enable Assignee to obtain, secure and protect the rights granted under this Assignment.

5. Assignee may assign the rights under this Assignment in whole or in part. All references herein to Assignee include any successors or assigns of Assignee.

6. Assignor acknowledges that Assignee has provided valuable consideration for the rights granted under this Assignment.

September 7, 2001  
Date

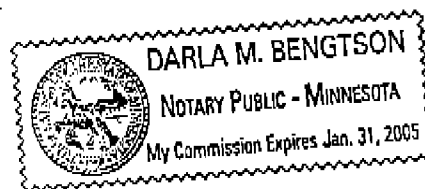
*Ann D. Davidson*  
Ann D. Davidson  
Assistant Secretary

On this 7<sup>th</sup> day of SEPTEMBER, 2001 Ann D. Davidson, who is known to me to be the person whose name is subscribed to the foregoing instrument, personally appeared and executed the foregoing instrument for the purposes therein contained.

IN WITNESS WHEREOF, I have set my hand and official seal.

*Darla M. Bengtson*

Notary Public



My Commission Expires:

01-31-2005

**ATTACHMENT A (PATENT APPLICATIONS)**

60/279,560  
60/227,176  
60/267,961  
60/267,962  
60/246,399  
60/266,030  
60/178,775  
60/171,619  
09/771,429  
60/178,775  
09/747,192  
60/188,182  
09/784,476  
60/177,218  
09/765,781  
60/260,704  
60/263,304  
09/481,709  
60/184,316  
09/789,479  
60/108,864  
60/179,394  
09/729,672  
60/108,455  
60/176,011  
09/759,594  
60/261,111  
07/913,841  
07/913,842  
09/698,472  
09/784,475  
07/107,701  
60/104,267  
09/417,713  
06/246,355  
07/292,028  
09/619,311  
60/145,129  
60/160,207  
09/688,819

1082-001

60/153,956  
09/661,557  
60/188,181  
09/803,236  
60/193,468  
09/813,687  
60/244,193  
60/234,341  
60/191,548  
09/803,235  
60/186,757  
09/797,929  
60/208,914  
60/193,457  
09/820,403  
60/246,097  
60/201,208  
09/841,900  
60/238,008  
60/215,064  
60/063,071  
08/097,662  
08/767,615  
08/401,074  
60/033,392  
08/235,308  
08/184,456  
09/025,345  
60/022,645  
08/746,224  
60/121,493  
09/505,872  
60/142,927  
09/604,679  
60/094,848  
60/004,170  
09/090,256  
60/025,362  
60/042,329  
09/396,479  
60/030,922

1082-001

09/311,298  
60/043,325  
60/022,645  
09/735,643  
60/132,201  
09/558,628  
60/032,675  
60/053,368  
60/063,460  
60/117,862  
09/492,530  
60/061,245  
60/061,236  
60/108,457  
09/436,357  
60/108,458  
09/436,360  
60/108,456  
09/436,440  
60/138,539  
09/589,113  
09/532,301  
60/097,117  
60/120,124  
60/120,186  
60/122,324  
60/124,674  
60/124,670  
60/115,855  
60/115,857  
60/115,859  
09/506,597  
60/115,856  
60/120,187  
60/228,765  
09/377,167  
60/217,315  
07/513,925  
09/503,726  
09/747,303

1082-001

**ATTACHMENT B (PATENTS)**

4,377,679  
4,394,458  
4,397,948  
4,399,238  
4,403,045  
4,435,023  
4,506,815  
4,507,188  
4,527,389  
4,530,855  
4,561,377  
4,599,945  
4,601,862  
4,662,893  
4,663,196  
4,708,758  
4,736,684  
4,764,319  
4,766,726  
4,793,866  
4,798,142  
4,806,613  
4,817,377  
4,819,426  
4,821,510  
4,840,024  
4,856,276  
4,866,930  
4,867,393  
4,901,642  
4,919,737  
4,925,936  
4,929,291  
4,930,541  
4,938,824  
4,952,644  
4,956,971  
4,959,110

1082-001

4,961,699  
4,970,857  
4,971,640  
4,976,794  
4,988,797  
4,999,997  
5,007,236  
5,011,721  
5,017,356  
5,020,731  
5,021,270  
5,024,160  
5,028,283  
5,031,539  
5,032,016  
5,035,363  
5,039,368  
5,044,154  
5,056,435  
5,060,470  
5,061,409  
5,062,206  
5,062,365  
5,070,691  
5,071,495  
5,071,506  
5,074,938  
5,076,868  
5,098,277  
5,099,042  
5,113,650  
5,120,827  
5,127,223  
5,145,543  
5,150,654  
5,154,782  
5,162,494  
5,166,468  
5,174,845  
5,180,452  
5,197,677  
5,206,989

1082-001



5,214,831  
5,228,285  
5,230,287  
5,232,526  
5,236,512  
5,240,523  
5,259,901  
5,264,596  
5,266,290  
5,273,785  
5,277,318  
5,279,492  
5,280,706  
5,289,723  
5,292,387  
5,309,617  
5,311,820  
5,322,002  
5,327,834  
5,334,270  
5,336,343  
5,341,638  
5,346,512  
5,347,931  
5,348,603  
5,352,312  
5,356,499  
5,359,416  
5,359,850  
5,363,768  
5,366,572  
5,367,872  
5,368,662  
5,369,955  
5,372,070  
5,372,664  
5,377,593  
5,380,777  
5,382,265  
5,386,776  
5,386,781

1082-001

5,391,025  
5,394,757  
5,398,612  
5,398,887  
5,399,309  
5,399,599  
5,400,713  
5,401,340  
5,406,082  
5,411,615  
5,414,123  
5,419,501  
5,427,452  
5,428,165  
5,429,691  
5,431,101  
5,435,128  
5,439,537  
5,441,303  
5,449,835  
5,451,682  
5,452,210  
5,456,455  
5,460,093  
5,460,669  
5,467,714  
5,468,313  
5,468,680  
5,468,866  
5,470,408  
5,472,532  
5,472,534  
5,472,647  
5,472,679  
5,487,851  
5,498,303  
5,498,649  
5,498,711  
5,500,059  
5,501,823  
5,507,090  
5,507,231

1082-001

5,511,745  
5,511,914  
5,516,377  
5,516,854  
5,520,768  
5,522,320  
5,523,517  
5,529,649  
5,531,163  
5,531,845  
5,536,990  
5,538,680  
5,540,794  
5,541,413  
5,545,278  
5,547,525  
5,554,820  
5,564,272  
5,565,150  
5,565,645  
5,577,630  
5,579,634  
5,579,635  
5,587,552  
5,587,553  
5,591,936  
5,592,812  
5,593,770  
5,600,946  
5,610,364  
5,613,358  
5,615,983  
5,616,884  
5,639,984  
5,644,000  
5,645,219  
5,648,556  
5,654,522  
5,660,884  
5,661,257  
5,670,098

5,673,935  
5,675,966  
5,682,014  
5,723,604  
5,725,699  
5,731,540  
5,735,114  
5,735,118  
5,739,325  
5,741,998  
5,747,603  
5,755,401  
5,759,458  
5,762,746  
5,763,027  
5,763,818  
5,767,221  
5,771,679  
5,792,981  
5,798,480  
5,801,325  
5,834,680  
5,844,165  
5,859,384  
5,874,574  
5,912,430  
5,942,720  
5,955,629  
5,970,703  
5,972,304  
5,984,369  
5,985,361  
5,996,502  
6,039,820  
6,051,087  
6,054,521  
6,059,045  
6,072,055  
6,084,106  
6,084,106  
6,086,692  
6,086,693

1082-001

6,088,925  
6,094,906  
6,095,367  
6,096,147  
6,100,375  
6,107,483  
6,123,789  
6,136,115  
6,147,209  
6,170,399  
6,171,530  
6,186,356  
6,190,475  
6,209,312  
6,214,137  
6,217,682  
6,217,799  
6,220,779  
6,224,099  
6,226,979  
6,235,359  
6,241,281  
6,272,954

1082-001