CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to the Department of Defense, Executive Services and Communications Directorate (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. **Please do not return your form to the above organization. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.**

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0001	A	TDP _____ TM _____ OTHER _____

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
	FA8650-22-C-	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
A001	SCIENTIFIC AND TECHNICAL REPORTS	Final Report	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE	18. ESTIMATED TOTAL PRICE
DI-MISC-80711A/T	CSOW	AFRL/RXA	

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
XX	B	ONE/R	See Block 16*

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
A	End of Tech Effort	See Block 16*

16. REMARKS

Block 4: Document format shall minimally conform to guidance described in the attached ANSI-based AFRL Format Guidelines. Include a completed Standard Form (SF) 298. If the Final Report contains data that is being delivered with less-than-unlimited rights, the data shall be appropriately marked within the Final Report.

NOTE: When the sensitivity of STINFO in draft and final deliverable documents meets the requirements of Controlled Unclassified Information (CUI) as dictated by EO 13556, "Controlled Unclassified Information," contractors must properly mark pages of their submitted documents with the acronym “CUI” at the top and bottom of each page and include the CUI designation indicator on the title page.

BLOCK 9: B: Distribution authorized to US Government agencies only ; (27 August 2021). Refer other requests for this document to AFRL/RXA.

Block 10: The contractor shall deliver the Scientific and Technical Report, in final format, no later than the date specified in the Schedule. USAF will review and, if necessary, return the report with comments no later than the date specified in the Schedule. If the report is returned to the contractor with comments, the contractor shall deliver the publication-ready copy of the report no later than the date specified in the...
(continued on next page)

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES: Draft	Final: Reg	Final: Repro
AFRL/RXA	1	1	0
AFRL/RXOP	1	1	0
15. TOTAL	2	2	0

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
George B . Orzel AFRL/RXA (937) 371-5314	27-AUG-2021		

CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0001	A	TDP _____ TM _____ OTHER _____

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
	FA8650-22-C-	

16. REMARKS *(Continued)*

Schedule.

Block 11: End of Technical Effort.

Block 12. 30 days from Block 11. Approval/disapproval by letter from the Air Force Program Manager within 30 days after receipt. Disapproval requires correction/resubmission within 30 days after receipt of Air Force comments.

The contractor shall deliver a draft of the final report IAW the ANSI-based AFRL Format Guidelines (attached), in editable MS Word format and editable PDF on appropriately labeled CD-ROM or DVD (label to include report title, contract number, CUI markings as required, distribution statement, and any data rights and/or export control notices) via approved postal delivery service, or as an attachment on a secure e-mail or sharing through other secure network systems such as DoD SAFE within 30 calendar days after completion of the technical effort. The AFRL Program Manager will take no more than 30 calendar days after delivery to review the draft final report and return technical and STINFO comments to the contractor. The contractor shall incorporate the combined STINFO and technical comments.

Block 13: End of Contract, 90 days from Block 11. The contractor shall deliver the final version of the report in publication-ready condition within 60 calendar days after the date of the draft submission (date in Block 12). The final report shall be delivered as described in the instruction in Block 12 above.

NOTE: Submittal of DD Form 250Z, Final Receiving Report or WAWF prior to acceptance notification will result in rejection of the Final Receiving Report. Hard date indicating when final tech report is due can be found in Section F in the contract.

The report will be published with the Defense Technical Information center (DTIC) by the AFRL STINFO officer.

Under no circumstances shall the contractor submit any version of the scientific and technical report to DTIC.

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to the Department of Defense, Executive Services and Communications Directorate (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. **Please do not return your form to the above organization. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.**

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0001	A	TDP _____ TM _____ OTHER _____

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
	FA8650-22-C-	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
A002	FUNDS AND MAN-HOUR EXPENDITURE REPORT		

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE	18. ESTIMATED TOTAL PRICE
DI-FNCL-80331A/T	CSOW	AFRL/RXA	

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	B	MTHLY	**

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	*	**

16. REMARKS

Tailored to allow contractor's format.

Submit electronically.

* At the close of the contractor's monthly accounting period.

** 25 days after Block 11 time.

BLOCK 9: B: Distribution authorized to US Government agencies only.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
/ACO	0	1	0
AFRL/RXA	0	1	0
AFRL/RXF	0	1	0
AFRL/RXKMA	0	1	0
15. TOTAL →	0	4	0

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
George B . Orzel AFRL/RXA (937) 371-5314	27-AUG-2021		

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0001	A	TDP _____ TM _____ OTHER _____

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
	FA8650-22-C-	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
A003	SCIENTIFIC AND TECHNICAL REPORTS	SPEND PLAN	

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE	18. ESTIMATED TOTAL PRICE
DI-MISC-80711A/T	CSOW	AFRL/RXA	

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	B	MTHLY	**

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	*	**

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
/ACO	0	1	0
AFRL/RXA	0	1	0
AFRL/RXF	0	1	0
AFRL/RXKMA	0	1	0
15. TOTAL →	0	4	0

16. REMARKS

Tailored to require the reporting of current work accomplished and billed against work scheduled to be accomplished for the cumulative total work effort in dollars as defined herein. The report will show a graphical/tabular depiction by month comparing BCWS, ACWP, and the contractor's billed amount. Block 10 is clarified so that distribution to DTIC shall only be through Air Force distribution channels.

Budget Cost of Work Scheduled (BCWS) means the estimated cost of all work scheduled to be accomplished for total work effort.

Actual Cost of Work Performed (ACWP) means the actual costs of work accomplished as of the reporting cut-off date.

Billed means the amount of funds that have been billed to the Government by the contractor.

Submit electronically.

* At the end of the contractor's monthly accounting period.

** 25 days after Block 11 time.

BLOCK 9: B: Distribution authorized to US Government agencies only.

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
George B . Orzel AFRL/RXA (937) 371-5314	27-AUG-2021		

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0001	A	TDP _____ TM _____ OTHER _____

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
	FA8650-22-C-	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
A004	CONTRACT FUNDS STATUS REPORT (CFSR)		

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE	18. ESTIMATED TOTAL PRICE
DI-MGMT-81468/T	CSOW	AFRL/RXA	

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	B	QRTLY	**

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	*	***

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
/ACO	0	1	0
AFRL/RXA	0	1	0
AFRL/RXF	0	1	0
AFRL/RXKMA	0	1	0
15. TOTAL →	0	4	0

16. REMARKS

Tailored so that the report contains forecasts by month for the next six months, by quarter for the remaining fiscal year, and by year for the remaining fiscal years. CFSR data shall be reconciled to the Governments fiscal year end at 30 September if the contractor's fiscal year end does not coincide with the Government's fiscal year end.

Submit electronically.

* The last day of the contractor's monthly accounting period nearest the end of the governments fiscal year quarter.

** The initial submission shall be within 25 calendar days after the close of the contractor's monthly accounting period nearest the end of the first government fiscal year quarter after contract award.

***Subsequent submissions shall be 25 calendar days after Block 11 time.

BLOCK 9: B: Distribution authorized to US Government agencies only.

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
George B . Orzel AFRL/RXA (937) 371-5314	27-AUG-2021		

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0001	A	TDP _____ TM _____ OTHER _____

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
	FA8650-22-C-	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
A005	STATUS REPORT		

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE	18. ESTIMATED TOTAL PRICE
DI-MGMT-80368A/T	CSOW	AFRL/RXA	

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	B	MTHLY	**

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	*	**

16. REMARKS

Tailored to allow contractor's format and to delete para 3.2.3.

Submit electronically, except when final report is due to be submitted, then omit this item.

* At the close of the contractor's monthly accounting period.

** 25 days after Block 11 time.

BLOCK 9: B: Distribution authorized to US Government agencies only.

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
/ACO	0	1	0
AFRL/RXA	0	1	0
AFRL/RXF	0	1	0
AFRL/RXKMA	0	1	0
15. TOTAL →	0	4	0

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
George B . Orzel AFRL/RXA (937) 371-5314	27-AUG-2021		

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0001	A	TDP _____ TM _____ OTHER _____

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
	FA8650-22-C-	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
A006	MATERIAL AND PROCESSING DIGITAL DATA PACKAGE (MPDDP)		

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE	18. ESTIMATED TOTAL PRICE
DI-MISC-82020/T	CSOW	AFRL/RXA	

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	B	2TIME	*

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	N/A	**

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
AFRL/RXA	0	1	0
15. TOTAL →	0	1	0

16. REMARKS

Tailored to allow contractor format.

Submit electronically.

* Mid point of the technical effort.

** At the conclusion of the technical effort.

BLOCK 9: B: Distribution authorized to US Government agencies only.

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
George B . Orzel AFRL/RXA (937) 371-5314	27-AUG-2021		

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0001	A	TDP _____ TM _____ OTHER _____

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
	FA8650-22-C-	

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
A007	PRESENTATION MATERIAL		

4. AUTHORITY *(Data Acquisition Document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE	18. ESTIMATED TOTAL PRICE
DI-ADMN-81373/T	CSOW	AFRL/RXA	

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
LT	B	ASREQ	*

8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION
N/A	N/A	*

14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
AFRL/RXA	0	1	1
15. TOTAL →	0	1	1

16. REMARKS

Tailored to require only view graphs or hard copy. Submittal of the actual viewgraph is not required if the presentation is computer generated.

ASREQ means as required to document topics under discussion at briefings and reviews.

* Submit at each briefing or review as appropriate.

Maximum # of view graphs shall not exceed 100 per year for this contract.

Submit reproducible on media compatible with MS-Office for Windows.

Submit electronically.

BLOCK 9: B: Distribution authorized to US Government agencies only.

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
George B . Orzel AFRL/RXA (937) 371-5314	27-AUG-2021		

INSTRUCTIONS FOR COMPLETING DD FORM 1423

(See DoD 5010.12-M for detailed instructions.)

FOR GOVERNMENT PERSONNEL

Item A. Self-explanatory.

Item B. Self-explanatory.

Item C. Mark (X) appropriate category: TDP - Technical Data Package; TM - Technical Manual; Other - other category of data, such as "Provisioning,""Configuration Management," etc.

Item D. Enter name of system/item being acquired that data will support.

Item E. Self-explanatory (to be filled in after contract award).

Item F. Self-explanatory (to be filled in after contract award).

Item G. Signature of preparer of CDRL.

Item H. Date CDRL was prepared.

Item I. Signature of CDRL approval authority.

Item J. Date CDRL was approved.

Item 1. See DoD FAR Supplement Subpart 4.71 for proper numbering.

Item 2. Enter title as it appears on data acquisition document cited in Item 4.

Item 3. Enter subtitle of data item for further definition of data item (optional entry).

Item 4. Enter Data Item Description (DID) number, military specification number, or military standard number listed in DoD 5010.12-L (AMSDL), or one-time DID number, that defines data content and format requirements.

Item 5. Enter reference to tasking in contract that generates requirement for the data item (e.g., Statement of Work paragraph number).

Item 6. Enter technical office responsible for ensuring adequacy of the data item.

Item 7. Specify requirement for inspection/acceptance of the data item by the Government.

Item 8. Specify requirement for approval of a draft before preparation of the final data item.

Item 9. For technical data, specify requirement for contractor to mark the appropriate distribution statement on the data (ref. DoDD 5230.24).

Item 10. Specify number of times data items are to be delivered.

Item 11. Specify as-of date of data item, when applicable.

Item 12. Specify when first submittal is required.

Item 13. Specify when subsequent submittals are required, when applicable.

Item 14. Enter addressees and number of draft/final copies to be delivered to each addressee. Explain reproducible copies in Item 16.

Item 15. Enter total number of draft/final copies to be delivered.

Item 16. Use for additional/clarifying information for Items 1 through 15. Examples are: Tailoring of documents cited in Item 4; Clarification of submittal dates in Items 12 and 13; Explanation of reproducible copies in Item 14.; Desired medium for delivery of the data item.

FOR THE CONTRACTOR

Item 17. Specify appropriate price group from one of the following groups of effort in developing estimated prices for each data item listed on the DD Form 1423.

a. Group I. Definition - Data which is not otherwise essential to the contractor's performance of the primary contracted effort (production, development, testing, and administration) but which is required by DD Form 1423.

Estimated Price - Costs to be included under Group I are those applicable to preparing and assembling the data item in conformance with Government requirements, and the administration and other expenses related to reproducing and delivering such data items to the Government.

b. Group II. Definition - Data which is essential to the performance of the primary contracted effort but the contractor is required to perform additional work to conform to Government requirements with regard to depth of content, format, frequency of submittal, preparation, control, or quality of the data item.

Estimated Price - Costs to be included under Group II are those incurred over and above the cost of the essential data item without conforming to Government requirements, and the administrative and other expenses related to reproducing and delivering such data item to the Government.

c. Group III. Definition - Data which the contractor must develop for his internal use in performance of the primary contracted effort and does not require any substantial change to conform to Government requirements with regard to depth of content, format, frequency of submittal, preparation, control, and quality of the data item.

Estimated Price - Costs to be included under Group III are the administrative and other expenses related to reproducing and delivering such data item to the Government.

d. Group IV. Definition - Data which is developed by the contractor as part of his normal operating procedures and his effort in supplying these data to the Government is minimal.

Estimated Price - Group IV items should normally be shown on the DD Form 1423 at no cost.

Item 18. For each data item, enter an amount equal to that portion of the total price which is estimated to be attributable to the production or development for the Government of that item of data. These estimated data prices shall be developed only from those costs which will be incurred as a direct result of the requirement to supply the data, over and above those costs which would otherwise be incurred in performance of the contract if no data were required. The estimated data prices shall not include any amount for rights in data. The Government's right to use the data shall be governed by the pertinent provisions of the contract.

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.

1. REPORT DATE *(DD-MM-YYYY)*	2. REPORT TYPE	3. DATES COVERED *(From - To)*

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			19b. TELEPHONE NUMBER *(Include area code)*

INSTRUCTIONS FOR COMPLETING SF 298

1. REPORT DATE. Full publication date, including day, month, if available. Must cite at least the year and be Year 2000 compliant, e.g. 30-06-1998; xx-06-1998; xx-xx-1998.

2. REPORT TYPE. State the type of report, such as final, technical, interim, memorandum, master's thesis, progress, quarterly, research, special, group study, etc.

3. DATES COVERED. Indicate the time during which the work was performed and the report was written, e.g., Jun 1997 - Jun 1998; 1-10 Jun 1996; May - Nov 1998; Nov 1998.

4. TITLE. Enter title and subtitle with volume number and part number, if applicable. On classified documents, enter the title classification in parentheses.

5a. CONTRACT NUMBER. Enter all contract numbers as they appear in the report, e.g. F33615-86-C-5169.

5b. GRANT NUMBER. Enter all grant numbers as they appear in the report, e.g. AFOSR-82-1234.

5c. PROGRAM ELEMENT NUMBER. Enter all program element numbers as they appear in the report, e.g. 61101A.

5d. PROJECT NUMBER. Enter all project numbers as they appear in the report, e.g. 1F665702D1257; ILIR.

5e. TASK NUMBER. Enter all task numbers as they appear in the report, e.g. 05; RF0330201; T4112.

5f. WORK UNIT NUMBER. Enter all work unit numbers as they appear in the report, e.g. 001; AFAPL30480105.

6. AUTHOR(S). Enter name(s) of person(s) responsible for writing the report, performing the research, or credited with the content of the report. The form of entry is the last name, first name, middle initial, and additional qualifiers separated by commas, e.g. Smith, Richard, J, Jr.

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES). Self-explanatory.

8. PERFORMING ORGANIZATION REPORT NUMBER. Enter all unique alphanumeric report numbers assigned by the performing organization, e.g. BRL-1234; AFWL-TR-85-4017-Vol-21-PT-2.

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES). Enter the name and address of the organization(s) financially responsible for and monitoring the work.

10. SPONSOR/MONITOR'S ACRONYM(S). Enter, if available, e.g. BRL, ARDEC, NADC.

11. SPONSOR/MONITOR'S REPORT NUMBER(S). Enter report number as assigned by the sponsoring/ monitoring agency, if available, e.g. BRL-TR-829; -215.

12. DISTRIBUTION/AVAILABILITY STATEMENT. Use agency-mandated availability statements to indicate the public availability or distribution limitations of the report. If additional limitations/ restrictions or special markings are indicated, follow agency authorization procedures, e.g. RD/FRD, PROPIN, ITAR, etc. Include copyright information.

13. SUPPLEMENTARY NOTES. Enter information not included elsewhere such as: prepared in cooperation with; translation of; report supersedes; old edition number, etc.

14. ABSTRACT. A brief (approximately 200 words) factual summary of the most significant information.

15. SUBJECT TERMS. Key words or phrases identifying major concepts in the report.

16. SECURITY CLASSIFICATION. Enter security classification in accordance with security classification regulations, e.g. U, C, S, etc. If this form contains classified information, stamp classification level on the top and bottom of this page.

17. LIMITATION OF ABSTRACT. This block must be completed to assign a distribution limitation to the abstract. Enter UU (Unclassified Unlimited) or SAR (Same as Report). An entry in this block is necessary if the abstract is to be limited.

AIR FORCE RESEARCH LABORATORY (AFRL) AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)/ NATIONAL INFORMATION STANDARDS ORGANIZATION (NISO)-BASED GUIDE TO FORMATTING TECHNICAL REPORTS

February 2018

HEADQUARTERS AFRL
DIRECTOR OF STAFF
INTEGRATION AND OPERATIONS DIVISION
INFORMATION MANAGEMENT
WRIGHT-PATTERSON AFB, OH 45433

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1.0 COMPONENTS OF A TECHNICAL REPORT

The United States Air Force uses ANSI/NISO Z39.18 as a formatting guide for technical reports. This guidance highlights fundamental formatting recommendations addressed in the ANSI/NISO standard, as shown in Table 1. Full component descriptions are available in the ANSI/NISO Z39.18 which can be found at the link below:
http://groups.niso.org/apps/group_public/download.php/12038/Z39_18_2005_R2010

Table 1. Components of a Technical Report

COMPONENT	RESPONSIBLE PARTY	INCLUSION STATUS
FRONT MATTER (page numbering sequentially with Roman numerals beginning with Table of Contents)		
Cover or Title	Government Work Unit Manager (WUM)	***Required***
Notice and Signature Page	Government WUM	***Required***
Notice to Accompany the Dissemination of Export-Controlled Technical Data (See Appendix B)	**Defense Technical information Center (DTIC) will add this to technical report.**	
Standard Form (SF) 298, *Report Documentation Page*	Report Author	***Required***
Table of Contents	Report Author	***Required***
List(s) of Figures and Tables	Report Author	Conditional *(include when there are more than five figures and/or tables)*
Foreword	Report Author	Optional
Preface	Report Author	Optional
Acknowledgements	Report Author	Optional
BODY (page numbering sequentially beginning with the Arabic numeral 1)		
Summary	Report Author	***Required***
Introduction	Report Author	***Required***
Methods, Assumptions, and Procedures	Report Author	***Required***
Results and Discussion	Report Author	***Required***
Conclusions	Report Author	***Required***
Recommendations	Report Author	Conditional *(include when purpose of report is to suggest a course of action)*
References	Report Author	Conditional (use if references are provided)
BACK MATTER (page numbering continues sequentially from body of report)		
Appendices	Report Author	Conditional ***(Include when needed to supplement Results and Discussion)***
Bibliography	Report Author	Conditional
List of Symbols, Abbreviations, and Acronyms	Report Author	Conditional ***(include if used in any other component of the report)***
Glossary of Terminology	Report Author	Conditional ***(Include if report incorporates terms unfamiliar to the intended audience)***
Index	Report Author	Optional
Distribution List	Report Author/Government WUM	Conditional ***(Some technology directorates control access)***
Back Cover	Report Author	Required for classified reports only

2.0 FRONT MATTER

2.1 **Cover Page** (see Table 2 and Figure 1)

- AFRL Shield, upper left-hand corner
- Technical Report Document Number
- Main Title
- Subtitle (if applicable)
- Author Name(s) (First Name/Last Name)
- Wing/Technical Directorate or Prime Contractor Company Name (address can be added. Just be consistent).
- Subcontractor Company Name (if applicable) (address can be added, just be consistent).
- Report Date (Month followed by four-digit year)
- Type of Report (interim or final)
- Distribution Statement and reasons for the statement's assignment (see Department of Defense Instruction (DoDI) 5230.24).
- Warning Statement for Export Control (if applicable)
- Destruction Notice
- Pointer Text to other limits
- Notice of Copyright (if applicable)
- Sponsoring Directorate

Table 2. Cover Page Elements

Component	Explanation
AFRL Shield	Located in upper left-hand corner.
Technical Report Number	Assigned by the directorate Science & Technical Information (STINFO) Office upon receipt.
Main Title	Accurate and specific to describe the contents of the report.
Subtitle	If applicable; Used for a delivery or task order (DO-TO) or volume title in a series.
Author Name(s)	Full names to include middle initial(s).
Company Name	Primary performing company name.
Report Date	Month and four-digit year.
Special Report Type	i.e., Small Business Innovative Research (SBIR), Small Business Technology Transfer (STTR) Broad Agency Announcement (BAA), etc.
Distribution Statement	Per the contract.
Data Rights Notice	Whenever Proprietary Information appears as a reason in a distribution statement, a description of the type of data rights in the report is provided parenthetically after the reason- Limited Rights Data, SBIR Data Rights, Government Purpose Rights Data Restricted Rights, etc.
Warning	Standard export control warning (if applicable)
Destruction Notice	Standard destruction notice, one for unclassified data and a different one for classified data.
Copy Right Notice	Asserted copyrights, if any.
Classification Caveats	For classified documents, derived from and declassification information.
Sponsoring Directorate	Address supplied by your local STINFO Office.

AFRL-RH-WP-TR-2017-XXXX

Be consistent with the font size (i.e., Main Title-16 pt/Bold, all caps; Subtitle- 14 pt/bold)

MAIN TITLE

Subtitle *(if applicable)*

Author(s) First name/Last name

Contractor Company Name *(if applicable)*

Author(s) First name/Last name

Subcontractor Company Name *(if applicable)*

Month/Year

Final Report

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711TH HUMAN PERFORMANCE WING
AIRMAN SYSTEMS DIRECTORATE
WRIGHT-PATTERSON AIR FORCE BASE, OH 45433
AIR FORCE MATERIEL COMMAND
UNITED STATES AIR FORCE

Figure 1. Sample of a Cover Sheet

2.2 Pages Following Coversheet

- The appropriate Notice Page or Pages (see Appendix A).
- Standard Form (SF) 298, *Report Document Page* (see Figure 2).
- Typically, three sections follow the SF 298 in this succession: Table of Contents, List of Figures, and List of Tables.

2.2.1. SF 298

The accuracy and completeness of the SF 298 are critical to the report so that the document will be more easily retrieved from Defense Technical Information (DTIC) or other databases. The Contractor/Author shall complete Blocks 1 – 5b, 6 – 8, 12 – 15 of SF 298 and submit per Contract Data Requirements List (CDRL) requirements. See Table 3 and Figure 2. Here is the link for SF 298: https://app_gsagov_prod_rdcgwaajp7wr.s3.amazonaws.com/SF%20298.pdf

Table 3. Explanation of SF 298 Components

Block No./Component	Explanation
1 Report Date	Month/year of the report, typically the month of or following the ending period of the performance month. Ensure this date matches the date on the cover.
2 Report Type	Final or Interim
3 Dates Covered (From-To)	The period during which the technical effort was performed.
4 Title/Subtitle	Should match the cover title/subtitle. Use a distinctive title and subtitle that distinguished the report from others that cover the same general topic, as when more than one report is produced that has the same overall title.
5a – 5b Contract and funding information	Information should be in the contract. If not, the AFRL Program Manager (PM) or STINFO Officer/Liaison will provide.
5c – 5f Contract information	AFRL WUM or STINFO Officer/Liaison will provide.
6. Authors	The author or authors' first and last names (initials are acceptable)
7. Performing Organization Name(s) and Address(es)	The organization(s) or company(ies) that performed the work. Most commonly, the name and address of only the prime contractor appears here.
8. Performing Organization Report Number	The number assigned to the document by the contractor or if in-house-authored, the number assigned to the document (see Block 11 description)
9. Sponsoring/Monitoring Agency (Name(s) and Address(es)	The organization providing technical oversight for the contract. Occasionally, an effort is co-sponsored, such as when an effort is co-funded by multiple government agencies, such as a division within the Defense Advanced Research Projects Agency (DARPA)
10. Sponsoring/Monitoring Agency Acronym(s)	Branch-level AFRL symbol or other controlling Department of Defense (DoD) office (CDO) descriptive acronym.
11. Sponsoring/Monitoring Agency Report Number(s)	The complete AFRL document number assigned by the directorate STINFO. Ex: AFRL-RD-PS-TR-2017-0010-TR
12. Distribution/Availability Statement	See Appendix A.
13. Supplementary Notes	Export control notice; SBIR information; references to previous editions or related volumes; copyright notice; special grant numbers; references to related documents, etc.
14. Abstract	The overall purpose of the research and/or its applications, including major results and conclusions
15. Subject Terms	Terms and key words that make the report accessible, making it appear in search retrieval lists.
16. Security Classification	The classification of the whole document.
17. Limitation of Abstract	Same as report (SAR) (Enter SAR)
18. Number of Pages	Total number of pages including front matter.
19a. Name of Responsible Person	Controlling DoD PM.
19b. Telephone Number	Controlling DoD PM. (Leave blank for Distribution A documents)

SAMPLE REPORT DOCUMENTATION PAGE	*Form Approved OMB No. 0704-0188*

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1. REPORT DATE *(DD-MM-YYYY)*	**2. REPORT TYPE**	**3. DATES COVERED** *(From - To)*
11/10/2016	FINAL	03 March 2015 – 11 December 2017

4. TITLE AND SUBTITLE	**5a. CONTRACT NUMBER**
Comparative Assessment of Torso and Seat Mounted Restraint Systems	FA8650-15-D-1111
	5b. GRANT NUMBER
(Ensure this title matches the cover sheet title)	**5c. PROGRAM ELEMENT NUMBER** 65502F
6. AUTHOR(S)	**5d. PROJECT NUMBER** 3005
First Name(s)/Last Name(s)	**5e. TASK NUMBER** 0001
	5f. WORK UNIT NUMBER H07L
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)	**8. PERFORMING ORGANIZATION REPORT NUMBER**
ABC Research 123 Any Street City, State Zip	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)	**10. SPONSOR/MONITOR'S ACRONYM(S)**
Air Force Research Laboratory Airman Systems Directorate Wright-Patterson Air Force Base 45433	**NOTE: If Block 7 is the same as Block 9, just fill in Block 7.** AFRL/RHC
	11. SPONSOR/MONITOR'S REPORT NUMBER(S) AFRL-RH-WP-TR-2017-0011

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14. ABSTRACT

This report was developed under a SBIR contract for topic ABC.

15. SUBJECT TERMS

SBIR

16. SECURITY CLASSIFICATION OF:			**17. LIMITATION OF ABSTRACT**	**18. NUMBER OF PAGES**	**19a. NAME OF RESPONSIBLE PERSON** AFRLWUM
a. REPORT Unclassified	**b. ABSTRACT** Unclassified	**c. THIS PAGE** Unclassified	SAR	77	**19b. TELEPHONE NUMBER** *(include area code)*

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std. Z39.18

Figure 2. Sample SF 298

2.4 Table of Contents

Start pagination of Table of Contents with lower-case Roman numeral "i" as shown in Figure 3. Start listing contents that are in the Front Matter (e.g., List of Figures, List of Tables, Foreword, Preface, the Body of text, then Back Matter). Appendix labels should be in alphabetical order, and page numbers should continue from the previous section. If there is only one Appendix, just call it an Appendix. If a report contains more than five figures or tables, or some combination totaling more than five, a list of figures and/or tables is required. If less than five, it is optional.

TABLE OF CONTENTS

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i

Figure 3. Table of Contents Example (border not required)

2.5 List of Figures

Continue pagination with lower-case Roman numerals as shown in Figure 4. List all figures found in text, excluding those that appear in any appendix (list appendix figures at the front of each appendix, if applicable).

LIST OF FIGURES

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Figure 1 Overall View of Propulsion Vehicle……..……19
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Figure 4. List of Figures Example (border provided for figure simulation only)

2.6 List of Tables

Continue pagination with lower-case Roman numerals as shown in Figure 5. List all Tables found in text, excluding those that appear in any appendix (list appendix tables at the front of each appendix, if applicable.)

LIST OF TABLES

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Figure 5. List of Tables Example (border provided for figure simulation only)

3.0 BODY

3.1 Required Headings

Start the body of the text with the **Summary or Executive Summary (1.0)** and begin pagination with Page 1 (Arabic numerals) (see Figure 3).

3.2 References

References should be listed numerically, in the order they appear in the text. The Reference page should be at the end of the report *(not at the end of each section)*. For works that are generally referred to throughout the report, without citing specific references from the work, create a Bibliography (in alphabetical order). Personal communications, unpublished speeches, or any other information not available for reference by the reader should not be included in the References – *footnote your citation instead*. References must be available to readers of the report. The examples below are a suggested format.

3.2.1. Papers / Journal Articles / Conference Presentations or Proceedings

Author's last name, then first name, Titles of papers are in quotation marks; Journal names or Conference names are in italics; Volume is bolded; Date follows comma (not within parenthesis); Page numbers (pp.) are last.

Examples:

Chidambaram, N., Dash, S., and Kenzakowski, D., "Scalar Variance Transport in the Turbulence Modeling of Propulsive Jets," *Journal of Propulsion and Power*, **17**, 1, Jan 2001, pp. 79-84.

Author(s), "Title of Article," Paper No. (if AIAA or CPIA paper, etc.), *Name of Conference,* Location, Date.

Chai, A.H., Cao, Z.T., Chen, H. P., "Monte Carlo Method Study of Terahertz Pulse, Propagation in Biological Tissue," *Proceedings of the 2005 IEEE, EMBS 27th Annual Conference,* Shanghai, China (2005).

3.2.2. URLs

The URL or other path information appears instead of the volume and number cited for a conventional journal. It is frequently useful to the reader to know the date when the material was accessed. In such cases, "Accessed [date]" would be appropriate wording.

Virillio, Paul, "Speed and Information: Cyberspace Alarm!" CTHEORY, URL: http://www.freedonia.com/ctheory/, last modified 19 September 1995. Accessed 17 November 1999

3.2.3. Technical Reports

Enter Author's last name, then first; Titles of reports are in italics; Next is report number; DTIC Accession Number, Distribution Code and/or PA Clearance/Date, Name and address of performing agency/organization; Date is last.

Example:

Author(s), Title, AFRL-PR-ED-TR-20XX-XXXX, Company, Inc., City, State, Jan 2006

In-House Author Example

Gaitonde, Datta, Advances in High-Fidelity Multiphysics Simulation, AFRL-RB-WP-TR-2008-3019; ADB123456, Distribution B, Wright-Patterson AFB: AFRL Air Vehicles Directorate, 2008

Gaitonde, Datta, Advances in High-Fidelity Multiphysics Simulation, AFRL-RB-330 WP-TR-2008-3019, XXABW Cleared XX/XX/XXXX; XXABW-XXXX-331 XXXX, Wright-Patterson AFB: AFRL Air Vehicles Directorate, 2008

3.2.4. Books

Enter Author's last name, then first name; Title of book can be **Bolded** or <u>Underlined</u>; Publisher's name and location (city and state); Date of publication; Page numbers last.

Example:

Author(s), **Book Title,** Harper & Rowe, New York, NY, 1993, pp. 36-38, 77, 98-101

Wylie, C.R., **Advanced Engineering Mathematics**, 7th ed, McGraw-Hill, New York, NY, 2005, pp 15-18

4.0 BACK MATTER

Pagination continues from the body. Include conditional and optional Back Matter in the order listed in the components table on page 1: Appendices, Bibliography, List of Symbols, Abbreviations, and Acronyms, Glossary, Index, Distribution List, and Back Cover.

4.1 Appendices

If there is only one appendix, the title Appendix would be without an alphabet letter (i.e., Appendix A, Appendix B). All tables and figures in that appendix are prefixed with A-, the "A" representing the word, Appendix. Each appendix should be referred to in the body text. Any references cited in an appendix must be listed as the last page of the appendix. Appendix page numbering is a sequential continuation of the Arabic text page numbering. Number figures, tables, equations, and references in an appendix with the letter of the appendix, followed by a hyphen and a sequential number, starting at 1, e.g., Figure A-1, A-2, B-1, B-2 for appendix figures, Table A-1, A-2, B-1, B-2 for appendix tables and A-1, B-1 for reference citations.

4.2 Symbols, Abbreviations and Acronyms

When first introduced in the report (title or text), completely write out abbreviations and acronyms, followed by the abbreviation or acronym in parentheses, e.i., Small Business Innovation Research (SBIR). Thereafter, use only the acronym/ abbreviation in the body text; i.e., SBIR only if they are proper names (e.g., Department of Defense). See Figure 6. Create an acronym list that lists and defines all acronyms and symbols that appear in your report. List all terms alphabetically, beginning with those starting with capital letters, followed by lower case (e.g., H2, HEDM, hcp). Follow alphabetical entries with Greek or special symbols. Capitalize definitions only if they are proper names (e.g. Department of Defense).

LIST OF SYMBOLS, ABBREVIATIONS AND ACRONYMS

CAT	Computerized Axial Tomography
COMSAT	Communication Satellites
DMP-128	a Polaroid™ photopolymer
DoD	Department of Defense
Dcg	dichromated gelatin
H^2	hydrogen
HEDM	High Energy Density Matter
∀	Angle of Attack

Figure 6. Example of Lists of Symbols, Abbreviations and Acronyms

5.0 FORMAT REQUIREMENTS.

5.1 Type (Font) and Headings (Section Titles)

The recommended font is 12-point Times New Roman or Arial throughout the report. Figure 7 shows an example (format and spacing) of headings:

1.0 HEADING 1 IS ALL UPPER CASE AND BOLDED

1.1 Heading 2 is Bolded, Same Font Size as Text, Upper and Lower Case, Flush with Left Margin

1.1.1. Heading 3 is Boldface, Upper and Lower Case Letters, *followed by a Period*. Then continue the copy.

Figure 7. Heading Formats

5.2 Spacing

Final reports should be single spaced. It isn't necessary to double-space between paragraphs if the first line of each paragraph is indented.

5.3 Margins

Leave 1-inch left, right, and top margins. Leave enough room at the bottom of each page to include page numbers and notices (applicable restrictive statements (i.e., Public Affairs (PA) Clearance, additional control markings, distribution statement, export control warning, etc., as applicable).

5.4 Numbering

Page numbers are centered at the bottom of the page, above the footer. Figure numbers and their captions are on the same line below figures, while table numbers and their captions are on the same line above the tables. (See Figure 4 and Figure 5).

6.0 PRESENTATION STYLES

6.1 Style for Equations, Figures, and Tables

All equations, figures and tables shall be crisp and easy to read as shown in Equation 1. Figure and Table Captions should be in at least an 8-point type (handwriting on figures and tables is not). List of figures and tables are numbered, worded, spelled and punctuated exactly as they are in the report.

6.1.1. Style for Equations

$$(1+x)^n = 1 + \frac{nx}{1!} + \frac{n(n-1)x^2}{2!} + \cdots \quad (1)$$

$$x = \frac{-b \pm \sqrt{b^2-4ac}}{2a} \quad (2)$$

Equation 1. Sample Equations

6.1.2. Style for Figure Captions

Figure captions should be in title case letters using a consistent font, as shown in Figure 8 below. The Figure Caption describes the content without giving background information, results, or comments about the figure. Reference to figures and tables must appear in the text before the actual figure or table appears in the report. Where possible, integrate figures and tables into text and place figure/table as soon after the first mention of it as possible, before beginning a new subject. There should be two blank lines between Figures or Tables and text.

Sample Representation Only
(border not required.)

Figure 8. Figure Caption is on Same Line as Figure Number

6.1.3. Style for Table Captions

Authors should use the style listed in section 4.1.2. As shown in Table 4, the caption line and caption number should be centered, bolded, with no period at the end of the caption.

Table 4. Table Caption is on Same Line as Table Number

NAME	ADDRESS	CITY, STATE

7.0 REFERENCES

ANSI/NISO Z39.18-2005 (R2010), Scientific and Technical Reports – Preparation, Presentation and Preservation, 13 May 2010.

Defense Federal Acquisition Regulation Supplement (DFARS) and Procedures, Guidance, and Information (PGI).

DoDI 5230.24, *Distribution Statements on Technical Documents*, 01 November 2017.

8.0 LIST OF ACRONYMS & GLOSSARY

AFRL – Air Force Research Laboratory
ANSI – American National Standards Institute
BAA – Broad Agency Announcement
CDO – Controlling DoD Office
CDRL – Contract Data Requirements List
DARPA – Defense Advanced Research Projects Agency
DoD – Department of Defense
DoDI – Department of Defense Instruction
DO-TO – Delivery – Task Order
DTIC – Defense Technical Information Center
NISO – National Information Standards Organization
PA – Public Affairs
PM – Program Manager
SAR – Same as Report
SBIR – Small Business Innovative Research
STINFO – Science & Technical Information
STTR – Small Business Technology Transfer
WUM – Work Unit Manager

APPENDIX A – Notice and Signature Pages

The following example notice page description would be used for a document NOT cleared for public release and for use with Controlled Unclassified Information (CUI) to which the Government has unlimited rights.

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AFRL-RH-WP-TR-20XX-XXXX HAS BEEN REVIEWED AND IS APPROVED FOR PUBLICATION.

Use Distribution A with this notice page if it is exempt from Public Affairs Security and Policy Review.

The following example notice page description would be used for a Government Purpose Rights (GPR) document.

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Using Government drawings, specifications, or other data included in this document for any purpose other than Government procurement does not in any way obligate the U.S. Government. The fact that the Government formulated or supplied the drawings, specifications, or other data does not license the holder or any other person or corporation; or convey any rights or permission to manufacture, use, or sell any patented invention that may relate to them.

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