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DEFENSE INDUSTRIAL BASE ASSESSMENT: U.S. SPACE INDUSTRY



SCOPE OF ASSESSMENT

The U.S. Department of Commerce, Bureau of Industry and Security (BIS), Office of Technology Evaluation, in coordination with the Defense Science Board (DSB) Task Force on the Space Industrial Base, is conducting a study of the U.S. space industry. Also participating in this joint effort are representatives from the U.S. Air Force, the National Security Space Office (NSSO), the National Oceanic and Atmospheric Administration (NOAA), the National Aeronautics and Space Administration (NASA), and others. The principal goal of this data collection is to analyze the health and competitiveness of the space industry in terms of industrial, financial, and economic performance. This includes an analysis of the effects of foreign competition and export controls on the industry's ability to meet the demand of defense and commercial markets.

RESPONSE TO THIS SURVEY IS REQUIRED BY LAW

A response to this survey is required by law (50 U.S.C. app. Sec. 2155). Failure to respond can result in a maximum fine of \$10,000, imprisonment of up to one year, or both. Information furnished herewith is deemed confidential and will not be published or disclosed except in accordance with Section 705 of the Defense Production Act of 1950, as amended (50 U.S.C App. Sec. 2155). Section 705 prohibits the publication or disclosure of this information unless the President determines that its withholding is contrary to the national defense. Information will not be shared with any non-government entity, other than in aggregate form. The information will be protected pursuant to the appropriate exemptions from disclosure under the Freedom of Information Act (FOIA), should it be the subject of a FOIA request.

Not withstanding any other provision of law, no person is required to respond to nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number.

BURDEN ESTIMATE AND REQUST FOR COMMENT

Public reporting burden for this collection of information is estimated to average 11 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 to BIS Information Collection Officer, Room 6883, Bureau of Industry and Security, U.S. Department of Commerce, Washington, D.C. 20230, and to the Office of Management and Budget, Paperwork Reduction Project (OMB Control No. ---- ----), Washington, D.C. 20503.

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WHO MUST RESPOND/EXEMPTION
Did your Company/Business Unit manufacture products or provide services for the space industry, or integrate products and/or services for the space industry, at any time since January 1, 2003?
check Ø here → Yes □ No □
If "No," please complete the "Exemption From Survey" box below and the requested information in 1.a "Company Information" and 24. "Certification."
EXEMPTION FROM SURVEY
If your Company's/Business Unit's operations <u>do not</u> fall within any of the space products and/or services, as defined in Question 2 "Product and Service Type Listing" you may be exempt from completing this survey. Please notify one of the contacts listed in "Points of Contact" to verify your status. Once you have received <u>verbal verification</u> of your exemption, please fill out the following:
Briefly explain the products and/or services provided by your Company/Business Unit.

GENERAL INSTRUCTIONS

ESTIMATES ARE ACCEPTABLE

It is not our desire to impose an unreasonable burden on any respondent. If information is not available from your records in the form requested, you may furnish estimates. Also, because your calendar year 2007 data will not be complete at the date of submission, please provide estimates.

CERTIFICATION

Please be certain to complete **Question 25**, "Certification," on the last page once your Company/Business Unit has completed the survey.

POINTS OF CONTACT

Question related to the survey should be directed to Jason Bolton, Trade and Industry Analyst, (202) 482-5936 (ibolton@bis.doc.gov), Ryan Hajen, Trade and Industry Analyst, (202) 482-6294 (rhajen@bis.doc.gov) or Brad Botwin, Program Director, Defense Industrial Base Assessments, (202) 482-4060 (bbotwin@bis.doc.gov). Our facsimile number is (202) 482-5361.

MAILING ADDRESS

Brad Botwin, Program Director
Office of Technology Evaluation, RM 1093
U.S. Department of Commerce
1401 Constitution Avenue, NW
Washington, DC 20230

ELECTRONIC INSTRUCTIONS

[Please Refer to Letter from the Bureau of Industry and Security, Office of Technology Evaluation. Letter includes required identification, login, and password information.]

COMPANY INFORMATION

riease provide the name, address, and phone in	unbei	or your Corr	ірапу/ви	SII 1622 C	יווונ.						
Company Name											
Division/Business Unit Name											
Street Address											
Suite Number											
City, State, and Zip Code	Cit	y >		State →	Zip	p →					
Phone Number and Extension				E	xtension -	→					
Fax Number											
Company/Business Unit Web Address											
1.b BUSINESS	DES	CRIPTION									
Please check ALL the boxes that describe your	space	related produ	ucts and/	or servic	ces op	eratio	ons a	nd			
business. Also, provide a description of your bu	siness	in the box p	rovided b	elow.							
The following categories best describe my re	ole in	the space in	dustry:	check 🗹							
Space Related Prime Contractor	S	pace Related	d Enginee	ering							
Space Related Subcontractor	S	pace Related	d Consult	ant							
Space Related Manufacturer	ated Manufacturer Space Related Information Manager					Space Related Information Manager					
Space Related Middle Tier Supplier	S	Space Related Equipment Distributor									
Space Related Lower Tier Supplier	S	pace Related	d Integrat	or							
My business if focused on the following active			0 (: 11					1			
Space Systems Integration		pace Electro									
Space Sub-Components Manufacturer		pace Naviga				cture	er				
Space Materials Supply/Manufacturer		pace Commu			er						
Space Launch Vehicle Manufacturer		pace Compo	<u> </u>	•							
Space Information Systems/Software Designer		pace System									
Space Propulsion Manufacturer		pace Missior									
Space Satellite Payload Manufacturer	S	pace Radar I	Manufact	urer							
Space Program/System Validation	S	pace Resear	ch and D	evelopn	nent						
Space and Ground Systems	S	pace Service	s.								
Description:	-										

1.c	OWNERS	SHIP							
Please indicate the entities and/or individuals holding 5 percent or more of your Company's voting									
rights, and also the percentage owned. If more than three, describe below the three entities and/or									
individuals holding the highest percentages.									
If not applicable, check ☑ here and	go to Question	2.							
Danas Fatitus alla di idual Nasa									
Parent Entity or Individual Name				0/					
Percentage Owned				%					
Address									
City									
State									
Zip Code									
Country									
Parent Entity or Individual Name									
Percentage Owned				%					
Address				/0					
City									
State									
Zip Code									
Country									
Parent Entity or Individual Name									
Percentage Owned				%					
Address		·							
City									
State									
Zip Code									
Country									

TERMINOLOGY

DEFINITIONS USED IN SURVEY

AUTHORIZING OFFICIAL – An executive officer of the Company/Business Unit or other individual who may have authority to execute this survey on behalf of the Company/Business Unit.

COMMODITY CLASSIFICATION (CC) – A commodity classification (CC) request is used to determine the regulatory treatment of a particular product or service under the Export Administration Regulations. The CC is performed by the U.S. Department of Commerce.

COMMERCIAL SALES – All sales to industry that are not directly related to defense programs.

COMMODITY JURISDICTION (CJ) – A commodity jurisdiction (CJ) request is used to determine whether an item or service is subject to the export licensing authority of the Department of Commerce or the Department of State. A CJ determination, performed by the Department of State, will only identify the proper licensing authority for an item, and is not a license or approval to export.

CURRENT ASSETS – Refers to cash, accounts receivable, inventory, marketable securities, pre-paid expenses and other assets convertible to cash within one year. Such assets shall refer to current assets held by the Company/Business Unit as a whole, or to a specific business unit, as determined by each particular question referring to Current Assets.

CURRENT LIABILITIES – Refers to accounts payable, notes payable, current maturities and accrued liabilities. Such liabilities shall refer to current liabilities held by the Company/Business Unit as a whole, or to a specific business unit, as determined by each particular question referring to Current Liabilities.

DEFENSE SALES – Sales to domestic and foreign military purchasers.

EXPORT ADMINISTRATION REGULATIONS (EAR) – EAR control the export, re-exports and activities of dual-use items. EAR is administered by the U.S. Department of Commerce

FIRM or COMPANY – An entity that owns, controls or otherwise is affiliated with one or more U.S. entities that, directly or indirectly, manufactures, produces, provides services for and/or integrates products and/or services pertaining to space products and services. Such entity may be an individual proprietorship, partnership, joint venture, business trust, laboratory, cooperative, entity subject to a U.S. Bankruptcy Court or other corporation (including any subsidiary entity in which the U.S. entity owns more than 50 percent of the outstanding economic or voting interest).

FOREIGN-MADE – Any space related products and/or services for which 50 percent or more of the value added of such item (excluding distribution, advertising and other marketing costs) was produced or otherwise generated outside the United States.

INTERNATIONAL TRAFFIC IN ARMS REGULATIONS (ITAR) – ITAR control the export and import of defense articles and defense-related services. The U.S. Department of State administers ITAR.

OPERATING INCOME – Gross profits less operating expenses (sales and marketing costs, R&D, and general and administrative costs, including salaries).

OPERATING PROFIT/LOSS – Operating income less interest expenses, all other expenses and losses on disposals.

SALES – Refers to the Company's/Business Unit's sales of space related products and/or services before interest and taxes.

DEFINITIONS USED IN SURVEY continued

SATELLITE PRODUCTS/SERVICES – Satellites, spacecraft subsystems, electronic components, space materials, and ground communication equipment. The "Products and Service Type Listing" includes these products, as specified and enumerated on pages 7-11 of this survey.

SPACE QUALIFIED PRODUCTS – Products designed, manufactured, and tested to meet special electrical, mechanical, and environmental requirements to make possible their use in the launch and deployments of satellite or high-altitude flight systems.

TOTAL ASSETS – Refers to all tangible and intangible assets, including fixed assets and Current Assets. Such assets shall refer to total assets held by the Company/Business Unit as a whole, or to a specific business unit, as determined by each particular question referring to Total Assets.

TOTAL LONG-TERM LIABILITIES – Refers to all debt with maturity dates greater than one year from issuance, and including mortgages, lease payments, pensions, revolving notes, and general debt. Such liabilities shall refer to long-term liabilities held by the Company/Business Unit as a whole, or to a specific business unit, as determined by each particular question referring to Long-Term Liabilities.

UNITED STATES – "United States" or "U.S." includes the 50 states, Puerto Rico, the District of Columbia, the island of Guam, the Trust Territories, and the Virgin Islands.

UNREGULATED EXPORTS – Exports that do not require an export license or are exempt from licensing requirements.

U.S. GOVERNMENT SALES – All sales to U.S. Department of Defense, U.S. Intelligence Community, or civilian agencies of U.S. Government, such as National Aeronautics and Space Administration (NASA) and U.S. Department of Commerce's National Oceanic and Atmospheric Administration (NOAA).

U.S.-MADE – Any space related products and services for which 50 percent or more of the value added of such item (excluding distribution, advertising and other marketing costs) was produced, conducted, created or otherwise generated within the United States, as defined herein.

2.	PF	RODUCT AND	SEF	RVICE	TYPE LISTING						
Pleas	Please check ALL the boxes for the products and/or services categories in A-J that apply to your space related business.										
Α	Satellite/Payload Manufacturing	check ☑ here →		Α	Satellite/Payload Manufacturing	check ☑ here →					
A.1	Re-entry System										
A.2	Shroud										
A.3	RV										
A.4	Deployment Module										
A.5	Interface Kit										
A.6	Guidance System										
A.7	Guidance Compulser										
A.8	Inertial Measurement										
A.10	Control and Power Electronics										
A.11	Structure "Wafer"										
A.12	Post-Boost Propulsion										
A.13	Axial and Attitude Control Engines										
A.14	Storage Tanks										
A.15	RF Payloads										
				1							
				1		+					
				1							
			<u> </u>	<u> </u>							

2. con	2. continued PRODUCT AND SERVICE TYPE LISTING – continued								
Please	Please check <u>ALL</u> the boxes for the products and/or services categories in <i>A-J</i> that apply to your space related business.								
B.	Spacecraft Subsystems check ☑ here →		B.	Spacecraft Subsystems continued check ☑ here →					
B.1	Communications Systems		B.34	Analysis					
B.2	Antenna Technology		B.35	Propulsion Subsystems					
B.3	Receiver Technology		B.36	Thermal Control					
B.4	Transmitter Technology		B.37	Thermal Control System Design					
B.5	Microwave Technology		B.38	Analysis					
B.6	Digital Communications Technology		B.39	Thermal Control Components					
B.7	Laser Communication Technology		B.40	Cryogenics					
B.8	Data Handling & Storage, Space Electronics		B.41	Structures					
B.9	Energy Generation		B.42	Structural System Design					
B.10	Solar Cell Technology		B.43	Structural Materials, Manufacturing Technology					
B.11	Solar Array Technology		B.44	Hydraulics, valves, actuators, pneumatics					
B.12	Power Generators (excluding solar)		B.45	Mechanisms (for antennas, solar arrays, masts)					
B.13	Power Conditioning and Energy Storage		B.46	Robotics					
B.14	Batteries and other Energy Storage Equipment		B.47	Safety, Destruction Technology; Pyrotechnics					
B.15	Power Conditioning/Management/Distribution		B.48	Small motors, dampers, and valves					
B.16	Attitude, Determination and Control		B.49	Propellants (Spacecraft only)					
B.17	Attitude Control System Design and Analysis								
B.18	Attitude Control and Stabilization Hardware								
B.19	Guidance and Navigation								
B.20	Sensors and Mechanisms								
B.21	Rendezvous and Docking								
B.22	Propulsion								
B.23	Chemical Propulsion Technology								
B.24	Electric Propulsion Technology								
B.25	Cold Gas Propulsion Systems								
B.26	Optics								
B.27	Attitude Sensors								
B.28	Fiber Optics Technology								
B.29	Infrared Components, Optics Components								
B.30	Visible Detectors (e.g., CCD, CMOS)								
B.31	Laser Technology								
B.32	Optical Instrumentation								
B.33	Optical Communications Technology								

2. continued PRODUCT AND SERVICE TYPE LISTING – continued										
	Please check <u>ALL</u> the boxes for the products and/or services categories in <i>A-J</i> that apply to your space related business.									
C.	Electronic Components	check Ø here →		C.	Electronic Components continued	check Ø here →				
C.1	Capacitors									
C.2	Connectors									
C.3	Crystals									
C.4	Diodes									
C.5	Filters									
C.6	Fuses									
C.7	Inductors									
C.8	Microcircuits, Discrete Semi	conductor Devices								
C.9	Relays									
C.10	Resistors									
C.11	Thermistors									
C.12	Transistors									
C.13	Wires and Cables									
C.14	Passive Devices									
C.15	Optoelectronic and Liquid Cr	ystal Devices								
C.16	Switches									
C.17	Film and Hybrid Integrated C	Circuits								
C.18	Printed Boards									
C.19	Tubes, Traveling Wave Tube	es (TWT)								
C.20	EEE Parts									
C.21	Gimbals									
C.22	Heat Pipes									

2. cont	2. continued PRODUCT AND SERVICE TYPE LISTING – continued								
Please	Please check ALL the boxes for the products and/or services categories in A-J that apply to your space related business.								
D.	Propulsion System check ☑ here →	D.	Propulsion System continued check ☑ here →						
D.1	Booster	D.34	Carbonized Rayon Cloth						
D.2	Solid Rocket Motors	D.35	Rayon Weaving						
D.3	Ignition	D.36	Rayon Fiber						
D.4	Safe/Arm Device	D.37	Densification Carbon Fiber Preform						
D.5	Ignition	D.38	Carbon Fiber						
D.6	Thrust Termination	D.39	Heat Sink						
D.7	Explosives	D.40	Flex Seal Bearing						
D.8	Propellant	D.41	Reinforced Glass Fiber						
D.9	Grain	D.42	Rubber and Elastomer						
D.10	Fuel	D.43	Exit Cone						
D.11	Oxidizer	D.44	Ablatives						
D.12	Binder	D.45	Thermal Insulation						
D.13	Plasticizer	D.46	Flight Control						
D.14	Inhibitor	D.47	Thrust Vector Actuation						
D.15	Liner	D.48	Pressurant Tanks						
D.16	Polymer	D.49	Flight Control Electronics						
D.17	Case	D.50	Servoiniectors/Valves						
D.18	Shell	D.51	Roll Control Gas Generators						
D.19	Steel	D.52	Interstages and Skirt						
D.20	Titanium	D.53	Shell						
D.21	Pre-Preg Carbon Fiber	D.54	Stage Separation						
D.22	Filament Wound Composite	D.55	Explosives						
D.23	Fiberglass	D.56	Raceway						
D.24	Aft Closure	D.57	Conduit						
D.25	Propellant Insulation	D.58	Cables						
D.26	EPDM	D.59	Insulation						
D.27	External Protection	D.60	Systems Integration						
D.28	VAMAC Rubber	D.61	Mission Integration						
D.29	Nozzle	D.62	Requirements Analysis						
D.30	Structure	D.63	Systems Architecture						
D.31	Forgings	D.64	Conceptual Design						
D.32	Throat Insert	D.65	Assembly Integration and Test						
D.33	Impregnated Carbon Cloth	D.66	D&D Phase Engineering						

2. continued PRODUCT AND SERVICE TYPE LISTING – continued								
Please	check ALL the boxes for the products and/or services ca	ateg	ories in	A-J that apply to your space related business.				
E.	Launch Vehicle Related Products/Services $\varnothing \rightarrow$		E.	Launch Vehicle Related P/S continued check ☑→				
E.1	Launch Vehicle Propulsion System		E.33	Controls				
E.2	Liquid Fuel Booster		E.34	Inertial				
E.3	Chamber		E.35	Gyroscope				
E.4	Propellant Feed		E.36	Processor				
E.5	Igniter		E.37	Controls				
E.6	Solid Rocket Booster		E.38	Safety System				
E.7	Casing		E.39	Destruct Receiver				
E.8	Igniter		E.40	Ordnance				
E.9	Propellant		E.41	Structural System				
E.10	Nozzle		E.42	Interstage				
E.11	Thrust Vector Control		E.43	Fairings				
E.12	Electrical Power		E.44	Skirt				
E.13	Generator		E.45	Telemetry				
E.14	Battery		E.46	Launch System Integration				
E.15	Harness		E.47	Launchers				
E.16	Operating System		E.48	Control Devices				
E.17	Hydraulic		E.49	Valves				
E.18	Servos-Controls		E.50	Launch Related Materials				
E.19	Actuators		E.51	Ablatives				
E.20	Lines-Fittings		E.52	Advanced Composites				
E.21	Pneumatic		E.53	Fibers				
E.22	Servos-Controls		E.54	Handling Equipment				
E.23	Actuators		E.55	Tooling				
E.24	Lines-Fittings		E.56	Protective Devices				
E.25	Electro-Mechanical		E.57	Health Monitoring Equipment				
E.26	Actuators		E.58	Ignition Devices Related Software Algorithms				
E.27	Motors		E.59	Rocket Motors				
E.28	Harness		E.60	Rocket Motor Parts and Devices				
E.29.	Guidance Systems		E.61	Defense Services Related to Launch Vehicle				
E.30	GPS		E.62	Defense Services Related to Rocket Motors	_			
E.31	Receivers		E.63	Technical Data Related to Launch Vehicle	_			
E.32	Processor		E.64	Technical Data Related to Rocket Motors				

2. con	tinued	PRODUCT AND S	ER۱	VICE	TYPE LISTING – continued	
Pleas	e check ALL the boxes for the produ	ucts and/or services ca	ateg	ories i	n A-J that apply to your space related business.	
F.	Satellite Services	check Ø here →		I.	Ground check Ø her	e →
F.1	Commercial Services			1.1	Ground Test Software	
F.2	Remote Services			1.2	Ground-based Mission Data Processing Equipmen	t
F.3	Product Assurance, Quality Con	rol, Safety		1.3	Electronic Ground Support Equipment	
F.4	Assembly, Integration and Testir	ng		1.4	Structure	
				1.5	Communications	
G.	Spacecraft Operations	check Ø here →		J.	Other check ☑ here	→
G.1	Ground antennas	-		J.1	Radiation Hardening	
G.2	TT&C (Telemetry, Tracking and	Control)		J.2	Flight Software	
G.3	Equipment	,		J.3	Mission Performance Analysis and Simulation	
				J.4	Mission Architecture Design	
H.	Specialty Components	check ☑ here →				
H.1	Batteries					
H.2	Coatings					
H.3	Communications Devices					
H.4	Cooling/Heating Devices					
H.5	Fiber Optic Parts					
H.6	Infrared/Visible Sensors					
H.7	Integrated Circuits/Semiconduct	ors				
H.8	Passive Electronics					
H.9	Radiation-Hardened/Tolerant El	ectronics				
H.10	Reaction Wheels					
H.11	Rocket Fuels					
H.12	Software					
H.13 H.14	Solar Cell/Panels Space Materials					
H.14 H.15	Space Materials Timing Devices					
11.13	Tilling Devices					

3.	3. PRODUCT AND SERVICE TYPE APPLICATIONS								
Pleas	Please check ALL the applications that correlate to the products and/or services your Company/								
Busin	Business Unit provide. If the list is inadequate, provide a description of application in the space below.								
↓ Ap	plication Code		lication Code						
3.a	Recreation/Entertainment check ☑ here →	3.h	Space Exploration check Ø here →						
3.b	Directed Energy	3.i	Basic Research						
3.c	Global Positioning System	3.j	Mission/Defense Operations						
3.d	Business Communications	3.k	Mapping						
3.e	Tourism/Hospitality	3.1	Meteorology						
3.f	Command and Control	3.m	Robotics						
3.g	Navigation	3.n	Radar						
Descri	ption:								

4.a	DOMESTIC CORP											
Instructions: Please (1) Identify significant contractual relationships that your Company/Business Unit has with other U.S. business entities; and (2) Describe the nature of these contractual relationships by checking the box of the categories provided, or by providing written explanations in the space below.												
			lies p	novia	eu, or b			Relation			pace be	JOW.
Name of Domestic Business Entity	City	State					٠,	k all that a	•			
			Joint venture w/ U.S. Firm	% Percent Ownership	Licensor to another U.S. Company/Business Unit.	Licensee for another U.S. Company/Business Unit.	Manufacturer for another U.S. Company/Business Unit.	Service provider for another U.S. Company/Business Unit.	Service integrator for another U.S. Company/Business Unit.	Co-production relationship with other U.S. Company/Business Unit	Product integrator for another U.S. Company/Business Unit.	Other: [Please describe in Comments box.]
1.												
2.												
3.												
4.												
5.												
6.												
7.												
8.												
Comments ->												
Instructions: Please describe any additional asp business entities identified above.	ects of the domestic business	relationship((S) tha	at you	ir Comp	any/Bus	siness C	nit nas	with one	or more	e or the	
Comments →												

4.b	FOREIGN COP	RPORATE	RE	ELA	TION	SHIPS	3					
Instructions: Please (1) Identify significant	contractual relationships t	hat your Com	oany/	Busii	ness Un	it has wi	th <u>other</u>	foreign	busine	ss entiti	es; and	(2)
Describe the nature of these contractual re	ationships by checking the	box of the cat	egori	es pr	ovided,						space	below.
Name of Foreign Business Entity	City	Country				7.		of Relati eck all that	•	i		
			Joint venture w/ U.S. Firm	% Percent Ownership	Licensor to another Foreign Company/Business Unit.	Licensee for another Foreign Company/Business Unit.	Manufacturer for another Foreign Company/Business Unit.	Service provider for another Foreign Company/Business Unit.	Service integrator for another Foreign Company/Business Unit.	Co-production relationship with Foreign Company/ Business Unit	Product integrator for another Foreign Company/Business Unit.	Other: [Please describe in the Comments box.]
1.												
2.												
3.												
4.												
5.												
6.												
7.												
8.												
Comments →												
Instructions: Please describe any additional	aspects of the foreign busine	ess relationshi	p(s) t	hat y	our Con	npany/Bi	usiness	Unit has	with one	or more	e of the	
business entities identified above.												
Comments →												

MERGERS & ACQUISITIONS Instructions: For calendar years 2003 through 2006, was your Company/Business Unit involved in any space related merger or												
	ons: For calend on activity?	ar years 2003 through 2006, was your Compai	ny/Business Unit involved in any <u>space</u> <u>relate</u>	<u>ea merg</u>	<u>er or</u>		Check Ap	propriate	Box]			
Note: If you	ou answered "Y Business Unit e	Yes," please complete the description table engaged in for the 2003-2006 period.	below for each (up to ten) merger and acquis	ition tha	t your	Yes		No				
#	Year of Transaction	Main Entity/Entities Involved in Transaction	Dollar Value of the Transaction (in \$ thousands)	Purchase of a Company	Percent of Ownership	Merger of Equals	Percent of Ownership	Acquired by a Company	Percent of Ownership			
1.												
2.												
3.												
4.												
5.												
6.												
7.												
8.												
9.												
10.												

6. SPACE RELATED DEFENSE & NON-DEFENSE SALES

Instructions: Please provide sales data for 2003-2007 for your defense and non-defense space-related products and/or services.

<u>Note</u>: Total **Defense** and **Non-Defense** <u>must</u> <u>equal</u> **Total** in the right column. The combination of **Domestic Sales** and **Foreign Sales** must equal **Total Sales** in the bottom row.

	2003 (in \$ thousands)		2004 (in \$ thousands)		2005 (in \$ thousands)		2006 (in \$ thousands)			2007 (estimate) (in \$ thousands)					
	Defense	Non- Defense	Total	Defense	Non- Defense	Total	Defense	Non- Defense	Total	Defense	Non- Defense	Total	Defense	Non- Defense	Total
Domestic Sales \$															
Foreign Sales \$															
Total Sales \$															

7.a TOP 10 PRODUCTS – PRODUCTION & SALES – 2003

Instructions: Please provide the information requested below on each of your Company's/Business Unit's top 10 (as measured by sales revenue) space related products and/or services for 2003 only. Complete the product information in descending order. Begin with your best (#1) selling space-related product or service

and end with your tenth (#10) best selling <u>space related</u> product or service.

2003 Тор	Product or Service Code	Code Code		propriate Box]	Total Sales	U.S. Sales	Foreign Sales	Production	Maximum Production	U.S. Parts
Ten Products	[from Question 2]	[from Question 3]	Defense	Non-Defense	(in \$ thousands)	(in \$ thousands)	Foreign Sales (in \$ thousands)	Levels (Units/Year)	Capacity (Units/Year)	Content (%)
#1										
#2										
#3										
#4										
#5										
#6										
#7										
#8										
#9										
#10										

7.b TOP 10 PRODUCTS – PRODUCTION & SALES – 2004

Instructions: Please provide the information requested below on each of your Company's/Business Unit's top 10 (as measured by sales revenue) space related products and/or services for 2004 only. Complete the product information in descending order. Begin with your best (#1) selling space-related product or service

and end with your tenth (#10) best selling space related product or service.

2004 Top	Product or Service Code		☑ [Check Ap	propriate Box]	Total Sales	U.S. Sales	Foreign Sales	Production	Maximum Production	U.S. Parts
Ten Products	[from Question 2]	Application Code [from Question 3]	Defense	Non-Defense	(in \$ thousands)	(in \$ thousands)	Foreign Sales (in \$ thousands)	Levels (Units/Year)	Capacity (Units/Year)	Content (%)
#1										
#2										
#3										
#4										
#5										
#6										
#7										
#8										
#9										
#10										

7.c **TOP 10 PRODUCTS – PRODUCTION & SALES – 2005**

Instructions: Please provide the information requested below on each of your Company's/Business Unit's top 10 (as measured by sales revenue) space related products and/or services for <u>2005 only</u>. Complete the product information in descending order. Begin with your best (#1) selling <u>space-related</u> product or service and end with your tenth (#10) best selling <u>space related</u> product or service.

2005 Top	Product or Service Code	Application Code	☑ [Check Ap	☑ [Check Appropriate Box]		U.S. Sales	Foreign Sales	Production	Maximum Production	U.S. Parts
Ten Products	[from Question 2]	[from Question 3]	Defense	Non-Defense	Total Sales (in \$ thousands)	(in \$ thousands)	Foreign Sales (in \$ thousands)	Levels (Units/Year)	Capacity (Units/Year)	Content (%)
#1										
#2										
#3										
#4										
#5										
#6										
#7										
#8										
#9										
#10										

7.d TOP 10 PRODUCTS – PRODUCTION & SALES – 2006

Instructions: Please provide the information requested below on each of your Company's/Business Unit's top 10 (as measured by sales revenue) space related products and/or services for **2006 only**. Complete the product information in descending order. Begin with your best (#1) selling **space-related** product or service and end with your tenth (#10) best selling **space related** product or service

and end wi	th your tenth (#10) best selli	ng space related	product or servi	ce.						
2006 Top Ten	Product or Service Code [from	Application Code [from	☑ [Check Ap	propriate Box]	Total Sales (in \$ thousands)	U.S. Sales (in \$ thousands)	Foreign Sales (in \$ thousands)	Production Levels	Maximum Production Capacity	U.S. Parts Content	
Products	Question 2]	Question 3]	Defense	Non-Defense	(III \$\psi \text{IIIOGSGIIGS})	(III \$ tilousulus)	(III \$ tilousalius)	(Units/Year)	(Units/Year)	(%)	
#1											
#2											
#3											
#4											
#5											
#6											
#7											
#8											
#9											
#10											

7.e TOP 10 PRODUCTS – PRODUCTION & SALES – 2007 projected

Instructions: Please provide the information requested below on each of your Company's/Business Unit's **projected** top 10 (as measured by sales revenue) space related products and/or services for **2007 only**. Complete the product information in descending order. Begin with your best (#1) selling **space-related** product or service and end with your tenth (#10) best selling **space related** product or service.

2007 Top	Service Code Code	Application	☑ [Check Ap	propriate Box]	Total Sales	U.S. Sales	les Foreign Sales ands) (in \$ thousands)	Production	Maximum Production	U.S. Parts
Products	[from Question 2]	[from Question 3]	Defense	Non-Defense	(in \$ thousands)	(in \$ thousands)	(in \$ thousands)	Levels (Units/Year)	Capacity (Units/Year)	Content (%)
#1										
#2										
#3										
#4										
#5										
#6										
#7										
#8										
#9										
#10										

8.a PROCUREMENTS – TOP FIVE U.S. PRODUCTS/SERVICES Instructions: For calendar year 2006, please list the five most significant products and/or services (i.e., by value added) that your company procures from domestic suppliers. If your product and/or service is not in Question 2, provide a description in the space provided. [Please include captive/internal producers.] ☑ [Check Appropriate Box] Is there a Are alternate Product/Service Is this supplier U.S. sources foreign. source Code a sole source? Domestic Source Company Name City State (from available? available? Question 2) Yes No Yes No Yes No 1. 2. 3. 4. 5. Description:

8.b													
	Instructions: For <u>calendar year 2006</u> , please list the <u>five most significant products and/or services</u> (i.e., by value added) that your company procures from <u>foreign suppliers</u> . If your product and/or service is not in Question 2 , provide a description in the space below. [Please include captive/internal producers.]												
	☑ [Check Appropriate Box]												
#	Question 2) available? available?												
	Question 2)				Yes	No	Yes	No	Yes	No			
1.													
2.													
3.													
4.													
5.													
Desc	Description:												

9. REASONS FOR FOREIGN SOURCING Instructions: For the five products and/or services cited in the previous question on "Foreign Procurement," please identify ALL the reasons your Company/														
	ness Unit procure		cts and/or serv	ices from Fore	ign vendors.	If reason not	included here,	provide ration			прапу/			
	Reasons for Procuring Products and/or Services from Foreign Vendors (Check all that apply)													
#	# Relationship Business Foreign Coustomer Sale Coustomer Service after Sale Other (specify in comments below) Other (specify in comments below)													
1.														
2.														
3.														
4.														
5.														
Com	ments:													

10).	EX	(PORTS OF SPACE PR	RODUCTS AND SERV	/ICES - 2003-2007	
Dic	d you	ır Company/Business Unit exp	ort space-related products and/or	services in calendar years 200	03-2007?	y → No Yes
			Top Exports of Space Pro	oducts & Services By Co	ountry – 2003-2007	
pro	duct	s for years 2003-2007. Export	enues, please list in descending on t revenues include sales to foreig s/Business Unit's products and/o	n distributors, resellers, retailer r services are subsequently res	s, brokers, or consumers of rela	Init exported space-related ated products and/or services,
No	ote: T	he combination of revenues fo	r exported products reported for t	Export Revenue [in \$ thousands] the ITAR. EAR and Other cate	gories must egual <i>Total</i> annual	exports for that country.
7.10		Country	ITAR (in \$ thousands)	EAR (in \$ thousands)	Other* (in \$ thousands)	Total (in \$ thousands)
	1.					
2003	2. 3.					
20	4.					
	5.					
	1.					
4	2.					
2004	3.					
	<i>4. 5.</i>					
	Э.					
	1.					
2	2.					
2005	3.					
N	4.					
	5.					
	1					
	1. 2.					
2006	3.					
20	4.					
	5.					
	1.					
ted	2.					
2007 (projected)	3.					
• • a						
*^+	5.	proports non ITAR non EAR ligansin	a procedures implemented by the U.S. Fe	odoral Government		

11.a DOMESTIC MARKET FORECAST				
		☑ [Check App	ropriate Box1	
<i>Instructions:</i> Describe expectations for your Company's/Business Unit's <u>domestic</u> space-related business for the <u>2008-2012</u> period.	Declines	No Changes/ Flat	Moderate Growth	Significan t Growth
I. What types of systems, subsystems and services are most likely to be in greatest demand by domestic customers describe in the space provided below.]	<u>s</u> in the 200	8-2012 perio	od? <i>[Pleas</i>	e _
Response:				
		☑ [Check App	ropriate Boxl	
II. Will your company be well positioned to compete in the <u>domestic</u> <u>markets</u> in the 2008-2012 period? [Please describe in the space provided below.] If "Not at All," indicate below the primary reasons.	Strongly	Moderately	Poorly	Not at All
Response:				
11.b EXPORT MARKET FORECAST				
		☑ [Check App	ropriate Box]	
Instructions: Describe expectations for your Company's/Business Unit's <u>export</u> of space-related products/ services for the <u>2008-2012</u> period.	Declines	No Changes/ Flat	Moderate Growth	Significant Growth
		•		
I. What types of systems, subsystems and services are most likely to be in greatest demand by foreign customers in the space provided below.	n the <u>2008</u> -	<u>2012</u> period	? Please o	describe
Response:				
II. Will your company be well positioned to compete in the <u>foreign markets</u> in the <u>2008-2012</u> period? [Please describe in the space provided below.] If "Not at All," indicate below the primary reasons.	Strongly	☑ [Check App Moderately		Not at All
Response:	1	<u> </u>	1	<u> </u>

12.	FOREIGN COMPETITORS – 2003-2006
-----	--

Instructions: Please list the top ten products and/or services (by revenue, largest to smallest) that competed directly with your Company's/Business Unit's space-related products and/or services from 2003-2006. Also, specify what factors make foreign producers' products competitive relative to your company's products.

▶ Please use the **Product and Service Type Listing in Question 2**

	▼ Please use III	le Product and Ser	vice Type Listing	in Question 2.	1										
								[☑ (chec	k all tha	at apply)			
Top Ten Foreign Products and/or Services	Product or Service Code	Foreign Product Name	Company	Country	Cost	Product Performance	Product Quality	Ability to Pay Bribes/Kickbacks	Bonus Features/ Services	Delivery Time/ Scheduling	Foreign Exchange	Export Licensing Requirements	Trade/Offset Arrangements	Access to Raw Materials	Other (specify in comments below)
#1															
#2															
#3															
#4															
#5															
#6															
#7															
#8															
#9															
#10															

Comments:

13.		LICEN	ISING AP	PLICATION	N & DECIS	ION HISTO	DRY - 200	3-2006		
		Number of License Total Number of Licenses Approved				<u>ımber</u> of Denied**		Attributable <u>d</u> Licenses:	Total <u>Lost Sales</u> Attributable to License Process:	
	Regulatory Regime		Regulator	ry Regime	Regulatory Regime Regulatory Regime Regulat		Regulator	tory Regime		
Year	ITAR*** EAR*** # #		ITAR #	EAR #	ITAR #	EAR #	ITAR (in \$ thousands)	EAR (in \$ thousands)	ITAR (in \$ thousands)	EAR (in \$ thousands)
2003										
2004										
2005										
2006										

^{*} Sales = Sales of products and/or services realized from licenses.

** Does not include *Returned without Action* (RWAs)

*** EAR = Export Administration Regulations; ITAR = International Traffic In Arms Regulations

14. SPACE PRODUCTS AND SER	14. SPACE PRODUCTS AND SERVICES – Licensing – 2003-2006										
The following questions 14.a-17.a pertain to your Company's/Business Unit's space related business and overall experience with the export licensing process for years 2003-2006 . The questions are divided into the following <u>four</u> sections:											
Space Products and Services: Denied Export Licenses	Space Products and Services: Denied Export Licenses 14.a-14.d										
Space Products and Services: Export Licenses Approved but Sales Lost	15.a-15.d										
Space Products and Services: License Approved, Sale Made, Follow-On Lost	16.a-16.d										
Company Views on Seeking Future Export Licenses	17.										

14.a SPACE PRODUCTS AND SERVICES: DENIED EXPORT LICENSES – 2003

Instructions: For space related products and/or services <u>denied an export license</u> in 2003, please: 1) State the type of product and/or service your Company/Business Unit was attempting to export and indicate with a check ☑ in the box whether it applied to the ITAR and/or EAR licensing regimes. 2) Provide other information requested regarding "Potential Customer," "Destination Country," "Intended End User," "Estimated Export Value." 3) Indicate with a check mark ☑ in the box whether a competitor offered a "Comparable Item," and if "Yes," provide up to three detailed examples in the "Comments" section. 4) Identify the Company/Business Unit that won the award, if known.

	pany/Business Unit	Regu	latory gime	Potential	Destination	Intended	Estimated Export Value	Comper Compar	titor Had able Item	Winning Company/
		ITAR	EAR	Customer	Country	End Use	(in \$ thousands)	Yes	No	Business Unit (If known)
1.										
2.										
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										
Lice	nments – from ense Examples 10 here →	Comm	ents:							
Lice	nments – from ense Examples 10 here →	Comm	ents:							
Lice	nments – from ense Examples 0 here →	Comm	ents:							
	-			Procee	d to the Next Page to L	ist 2004 Export Licens	se Denials			

14.b SPACE PRODUCTS AND SERVICES: DENIED EXPORT LICENSES – 2004

Instructions: For space related products and/or services denied an export license in 2004, please: 1) State the type of product and/or service your Company/Business Unit was attempting to export and indicate with a check ☑ on the box whether it applied to the ITAR and/or EAR licensing regimes. 2) Provide other information requested regarding "Potential Customer," "Destination Country," "Intended End User," "Estimated Export Value." 3) Indicate with a check mark ☑ in the box whether a competitor offered a "Comparable Item," and if "Yes," provide up to three detailed examples in the "Comments" section. 4) Identify the Company/Business Unit that won the award, if known.

	pany/Business Unit t Product/Service	Regu	latory gime	Potential	Destination	Intended	Estimated Export Value	Compet	titor Had able Item	Winning Company/
		ITAR	EAR	Customer	Country	End Use	(in \$ thousands)	Yes	No	Business Unit (If known)
1.										
2.										
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										
Lice	ments – from nse Examples 10 here →	Comm	ents:							
Lice	ments – from nse Examples 10 here →	Comm	ents:							
Lice	ments – from nse Examples	Comm	ents:							
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				Proceed	a to the Next Page to L	ist 2005 Export License	e Deniais			

14.c SPACE PRODUCTS AND SERVICES: DENIED EXPORT LICENSES – 2005

Instructions: For space related products and/or services <u>denied an export license</u> in 2005, please: 1) State the type of product and/or service your Company/Business Unit was attempting to export and indicate with a check ☑ in the box whether it applied to the ITAR and/or EAR licensing regimes. 2) Provide other information requested regarding "Potential Customer," "Destination Country," "Intended End User," "Estimated Export Value." 3) Indicate with a check mark ☑ in the box whether a competitor offered a "Comparable Item," and if "Yes," provide up to three detailed examples in the "Comments" section. 4) Identify the Company/Business Unit that won the award, if known.

	pany/Business Unit t Product/Service	Regu	latory gime	Potential	Destination	Intended	Estimated Export Value	Compet	titor Had able Item	Winning Company/
		ITAR	EAR	Customer	Country	End Use	(in \$ thousands)	Yes	No	Business Unit (If known)
1.										
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5.										
6.										
7.										
8.										
9.										
10.										
Lice	ments – from nse Examples 10 here →	Comm	ents:							
Lice	ments – from nse Examples 10 here →	Comm	ents:							
Lice	ments – from nse Examples	Comm	ents:							
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				Proceed	a to the Next Page to L	ist 2006 Export License	e Deniais			

14.d SPACE PRODUCTS AND SERVICES: DENIED EXPORT LICENSES – 2006

Instructions: For space related products and/or services <u>denied an export license</u> in 2006, please: 1) State the type of product and/or service your Company/Business Unit was attempting to export and indicate with a check ☑ in the box whether it applied to the ITAR and/or EAR licensing regimes. 2) Provide other information requested regarding "Potential Customer," "Destination Country," "Intended End User," "Estimated Export Value." 3) Indicate with a check ☑ in the box whether a competitor offered a "Comparable Item," and if "Yes," provide up to three detailed examples in the "Comments" section. 4) Identify the Company/Business Unit that won the award, if known.

	Product/Service	Regu	latory gime	Potential	Destination	Intended	Estimated Export Value		titor Had able Item	Winning Company/
		ITAR	EAR	Customer	Country	End Use	(in \$ thousands)	Yes	No	Business Unit (If known)
1.										
2.										
3.										
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8.										
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Lice	ments – from nse Examples 10 here →	Comm	ents:							
Lice	ments – from nse Examples 10 here →	Comm	ents:							
Lice	ments – from nse Examples	Comm	ents:							
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15.a SPACE PRODUCTS AND SERVICES: EXPORT LICENSES APPROVED BUT SALES LOST – 2003

Instructions: This table pertains to instances where, in 2003, export licenses were granted, but a sale was lost because of the lengthy approval process and/or export licensing conditions. Please: 1) State the type of product and/or service your Company/Business Unit was authorized to export and indicate with a check ☑ in the box whether it applied to the ITAR and/or EAR licensing regimes. 2) Provide other information requested regarding "Potential Customer," "Destination Country," "Intended End User," "Estimated Export Value." 3) Indicate with a check ☑ in the box whether a competitor offered a "Comparable Item," and if "Yes." provide up to three detailed example(s) in the "Comments" section. 4) Identify the Company/Business Unit that won the award, if known.

	es," provide up to thi Product/Service	Regu	latory gime	Potential	Destination	Intended	Estimated Export Value	Compet	itor Had able Item	Winning Company/
		ITAR	EAR	Customer	Country	End Use	(in \$ thousands)	Yes	No	Business Unit (If known)
1.										
2.										
3.										
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5.										
6.										
7.										
8.										
9.										
10.										
Lice	ments – from nse Examples 10 here →	Comm	ents:							
Lice	ments – from nse Examples 10 here →	Comm	ents:							
Lice	ments – from nse Examples 0 here →	Commo	ents:							
#1-1	u nere 7 🗀			Proceed to the Next F	Page to list examples of	flicenses granted in 20	04, but a sale was lost.			

15.b SPACE PRODUCTS AND SERVICES: EXPORT LICENSES APPROVED BUT SALES LOST – 2004

Instructions: This table pertains to instances where, in 2004, export licenses were granted, but a sale was lost because of the lengthy approval process and/or export licensing conditions. Please: 1) State the type of product and/or service your Company/Business Unit was authorized to export and indicate with a check ☑ in the box whether it applied to the ITAR and/or EAR licensing regimes. 2) Provide other information requested regarding "Potential Customer," "Destination Country," "Intended End User," "Estimated Export Value." 3) Indicate with a check ☑ in the box whether a competitor offered a "Comparable Item," and if "Yes," provide up to three detailed example(s) in the "Comments" section. 4) Identify the Company/Business Unit that won the award, if known.

	es," provide up to thr Product/Service	Regu	latory gime	Potential	Destination	Intended	Estimated Export Value	Compet	titor Had able Item	Winning Company/
		ITAR	EAR	Customer	Country	End Use	(in \$ thousands)	Yes	No	Business Unit (If known)
1.										
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	nments – from nse Examples	Comm	ents:							
	0 here →									
				Proceed to the Next F	age to list examples o	f licenses granted in 20	05, but a sale was lost.			

15.c SPACE PRODUCTS AND SERVICES: EXPORT LICENSES APPROVED BUT SALES LOST – 2005

Instructions: This table pertains to instances where, in 2005, export licenses were granted, but a sale was lost because of the lengthy approval process and/or export licensing conditions. Please: 1) State the type of product and/or service your Company/Business Unit was authorized to export and indicate with a check ☑ in the box whether it applied to the ITAR and/or EAR licensing regimes. 2) Provide other information requested regarding "Potential Customer," "Destination Country," "Intended End User," "Estimated Export Value." 3) Indicate with a check ☑ in the box whether a competitor offered a "Comparable Item," and if "Yes," provide up to three detailed example(s) in the "Comments" section. 4) Identify the Company/Business Unit that won the award, if known.

	es," provide up to the Product/Service	Regu	latory gime	Potential	Destination	Intended	Estimated Export Value	Compet	titor Had able Item	Winning Company/
		ITAR	EAR	Customer	Country	End Use	(in \$ thousands)	Yes	No	Business Unit (If known)
1.										
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Lice	nments – from nse Examples	Comm	ents:							
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15.d SPACE PRODUCTS AND SERVICES: EXPORT LICENSES APPROVED BUT SALES LOST – 2006

Instructions: This table pertains to instances where, in 2006, export licenses were granted, but a sale was lost because of the lengthy approval process and/or export licensing conditions. Please: 1) State the type of product and/or service your Company/Business Unit was authorized to export and indicate with a check in the box whether it applied to the ITAR and/or EAR licensing regimes. 2) Provide other information requested regarding "Potential Customer," "Destination Country," "Intended End User," "Estimated Export Value." 3) Indicate with a check in the box whether a competitor offered a "Comparable Item," and if "Yes," provide up to three detailed example(s) in the "Comments" section. 4) Identify the Company/Business Unit that won the award, if known.

	es," provide up to thi Product/Service	Regu	latory gime	Potential	Destination	Intended	Estimated Export Value	Compet	titor Had able Item	Winning Company/
		ITAR	EAR	Customer	Country	End Use	(in \$ thousands)	Yes	No	Business Unit (If known)
1.										
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7.										
8.										
9.										
10.										
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	10 here → □									
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	ense Examples 0 here →									
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16.	a SPACE PRO	ODUC	TS AN	ID SERVICES: LIC	CENSE APPROVI	ED, SALE MADE,	FOLLOW-	ON LO	ST – 2	003
				Unit lose follow-on busing				☑ Chec	k Approp	oriate Box
prod	uct and/or service you	r Compa	ny/Busin	rt license was approved a ess Unit was licensed to	export and indicate with a	check I in the box whet	ther it applied	Yes		No
				Provide other informationLost Future Export Value						
offer		," and the		e up to three detailed exa						
NO,	proceed to the next		latory				Estimated	Loct	Compe	etitor Has
ı	Product/Service	Reg	gime	Potential Customer	Destination Country	Intended End Use	Future Expo	rt Value		rable Item
		ITAR	EAR		Country	Ziid Goo	(in \$ thousa	ands)	Yes	No
1.										
2.										
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										
	ments – from nse Examples	Comme	ents:							
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	ments – from nse Examples	Comme	ents:							
	10 here →									
	ments – from nse Examples	Comme	ents:							
	0 here →									
				Proceed to the Next Pag	e to List 2004 Lost Follow-On	Space Related Business.				

For year 2004, did your Company/Business Unit lose follow-on business with foreign customers as a consequence of export control-related sissues, even through an export licenses was analoge? If "Yes," pleases it applied to the TAR and/of EAR licensing regimes. 2) Provide other information requested regarding "Professition Country," intended End User' and "Estimated Lost Future Export Value". 3) Indicate with a check Ell in the box whether a competitor "No," proceed to the next section. Product/Service Regulatory ITAR EAR Potential Customer Potential Customer Potential Customer Potential Customer Destination Country Regulatory Foreign exposed to the next section. Product/Service Regulatory TAR EAR Potential Customer Potential Customer Potential Customer Destination Country Regulatory Foreign exposed to the next section. Regulatory TAR EAR Potential Customer Potential Customer TAR EAR Competitor Has Comparable lemination Country Regulatory TAR EAR Regulatory Potential Customer Regulatory TAR EAR Regulatory Regul	16.	b SPACE PRO	OD <u>UC</u>	TS AN	ND SERVICES: LIC	CENSE APPROVI	ED, SALE MADE,	FOLLOW-	ON LO	ST <u>– 2</u>	004
product/Service Order and/or service your CompanyBusiness Unit was licensed to export and indicate with a check & in the box whether it applied to the ITAR and/or EAR license Examples #1-10 here > □ Comments - from License Examples #1-10 here → □ Comments - from License Examples #1-10 here → □ Comments - from License Examples #1-10 here → □ Comments - from License Examples #1-10 here → □ Comments - from License Examples #1-10 here → □ Comments - from License Examples #1-10 here → □ Comments - from License Examples		ear 2004, did your Co	mpany/E	Business	Unit lose follow-on busi	ness with foreign custo	mers as a consequence	of export			
Country, "Intended End User" and "Estimated Lost Future Export Value." 3) Indicate with a check Ø in the box whether a competitor offers a "Comparable Item," and then provide up to three detailed example(s) in the "Comments" section. Note: If you responded "No," proceed to the next section. Regular Product/Service Regular Product/Service Potential Customer Potential Customer Potential Customer Country Estimated Lost Future Export Value (in 3 thousands) Potential Customer (in 3 thousands) Potential	prod	uct and/or service you	r Compa	ny/Busin	ess Unit was licensed to e	export and indicate with a	check ☑ in the box whet	her it applied	Yes		No
offers a "Comparable Item," and then provide up to three detailed example(s) in the "Comments" section. Note: If you responded Note: If you responded Regular Product/Service Flat Estimated Lost Fluttre Export Value (in \$ thousands) Potential Customer Potential Customer Potential Customer Country Intended End Use Estimated Lost Fluttre Export Value (in \$ thousands) Potential Customer Potential Custo											
Regulatory Restrict TAR EAR Potential Customer Destination Country Estimated Lost pluture Export Value (in \$ fhousands) TAR EAR Full (in \$ fhousands) TAR EAR Full (in \$ fhousands) TAR EAR Full (in \$ fhousands) TAR	offer	s a "Comparable Item,	" and the								
Product/Service Regime Potential Customer Country End Use Future Export Value (in 5 thousands) TAR EAR	NO,	proceed to the next		latory				Eatimated	Loot	Compe	titor Has
TAR EAR	ı	Product/Service			Potential Customer			Future Expo	rt Value		
2.			ITAR	EAR		Country	Liid 030	(in \$ thousa	nds)	Yes	No
3.	1.										
4.	2.										
5.	3.										
6.	4.										
7.	5.										
8.	6.										
9.	7.										
10. Comments - from License Examples #1-10 here →	8.										
10. Comments - from License Examples #1-10 here →	9.										
Comments – from License Examples #1-10 here → □ Comments – from License Examples #1-10 here → □ Comments – from License Examples #1-10 here → □ Comments – from License Examples #1-10 here → □											
#1-10 here \rightarrow Comments - from License Examples #1-10 here \rightarrow Comments: Comments - from License Examples #1-10 here \rightarrow Comments:		ments – from	Comme	ents:							
Comments – from License Examples #1-10 here → □ Comments – from License Examples #1-10 here → □ Comments – from License Examples #1-10 here → □	Lice	nse Examples									
License Examples #1-10 here → □ Comments – from License Examples #1-10 here → □ Comments:	#1-1	0 here → 🔲									
#1-10 here → □ Comments – from License Examples #1-10 here → □ Comments:			Comm	ents:							
License Examples #1-10 here → □		<u> </u>									
#1-10 here > \(\begin{align*} \text{-10} & \			Comm	ents:							
		· -									
FIGUREO TO THE NEXT FACE TO LIST 2000 FOR FORDOW-UT SOACE METALED DUNIDESS.	#1-1	0 here → L			Proceed to the Next Page	e to List 2005 Lost Follow-On	Space Related Rusiness				

16.	SPACE PRO	ODUC	TS AN	ID SERVICES: LIC	CENSE APPROVI	ED, SALE MADE,	FOLLOW-	ON LO	ST - 2	2005
For y	ear 2005, did your Co	mpany/E	Business	Unit lose follow-on busing	ness with foreign custo	mers as a consequence	of export			priate Box
				rt license was approved a ess Unit was licensed to e				Yes		No
				Provide other informationLost Future Export Value						
offer	s a "Comparable Item,	," and the		e up to three detailed exa						
"NO,	"proceed to the next		latory						Comp	etitor Has
ı	Product/Service		ime	Potential Customer	Destination Country	Intended End Use	Estimated Future Expo	rt Value	Comparable Item	
		ITAR	EAR		Country	Liiu Ose	(in \$ thousa	nds)	Yes	No
1.										
2.										
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										
	ments – from nse Examples	Comme	ents:			<u> </u>				
	nse Examples 10 here → □									
Con	ments – from	Comme	ents:							
	nse Examples									
	10 here → □	Comm	onto:							
	ments – from nse Examples	Comme	ษาเร:							
#1-1	0 here → □									
				Proceed to the Next Pag	e to List 2006 Lost Follow-On	Space Related Business.				

16.	d SPACE PRO	ODUC	TS AN	ND SERVICES: LIC	CENSE APPROVI	ED, SALE MADE,	FOLLOW-	ON LO	ST –	2006
For y	ear 2006, did your Co	mpany/E	Business	Unit lose follow-on busing the license was approved a	ness with foreign custo	mers as a consequence	of export			opriate Box
				ess Unit was licensed to				Yes		No
Cour offer	ntry," "Intended End U	ser" and ," and the	"Estimate	Provide other informatived Lost Future Export Value up to three detailed exa	ue." 3) Indicate with a ch	eck ☑ in the box whether	r a competitor			
	Product/Service	Regulatory Regime Potential Customer Destination Intended Future Export Value								
		ITAR	EAR		Country	End Use	(in \$ thousa		Yes	No
1.										
2.										
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										
	nments – from nse Examples	Comme	ents:							
#1-1	10 here →									
	nments – from nse Examples	Comme	ents:							
#1-1	10 here →									
	nments – from nse Examples	Comme	ents:							
	0 here → \square									
					Finished with this Section					

17. CO	MPANY VIEWS ON SEEKING FUTURE EXPORT LICENSES			
Has your Company/Business Unit decided delays? Please explain in "Comments" be	not to apply for export licenses because of past experiences with denials, conditions of	ck Ø here → or extended	Yes	No
Comments:				
Has your Company/Business Unit consider Please explain in "Comments" below.	chered changed its business model in response to export requirements?	ck Ø here →	Yes	No
Comments:				
Is your Company/Business Unit considering Please explain in "Comments" below.	cheng limiting its business activities or product lines to domestic customers only?	ck Ø here →	Yes	No
Comments:				

18.a	EXPORT LIC	CENSING (CONDI	TIONS					
	y/Business Unit applied for an export license that involves use Agreements (MLA)?	participation in	a Technic	al Assista	ance Agreeme		∄ here →	Yes	No
			Ye	ear	Number /		Average	Proces (in day	
If "Yes,"	1.) How many were approved?				TAA	MLA	TAA	• •	ИĹА
				003					
	2.) How long did the process take, on average?			004					
				005					
			20	006					
Have amendments Agreements (TAA)	s, conditions, return shipments or other added factors invol or Manufacturer Licensing Agreements (MLA) negatively	impacted your b	an export ousiness?	license fo	or performing 1		stance 7 here ->	Yes	No
	comments (xamples of the negative impacts resulting sistance Agreements (TAA) and Manufacturer ents (MLA).	•							
			•					V	Ma
Do <u>non-U.S.</u> expoi	rt control regimes give your competitors an advantage in	the marketplace) ?			ohook F	∄ here →	Yes	No
		Count	wa		Com				
		Count	ıy		Con	npetitive Adva	antage		
	ne countries (up to three) and describe the competitive	1.							
those particular co	d by your competitor(s) through processing licenses in	2.							
those particular co	unines.	3.							
Has your Company	y/Business Unit ever submitted a Commodity Jurisdiction (CJ) or Commod	lity Classi	ification (0	CC) request?	check &	☑ here →	Yes	No
			Yea	ar	Number A	Approved	Average Time	Proce (in day	
If "Yes,"	1.) How many were approved?				CJ	CC	CJ		CC
			200						
	2.) How long did the process take, on average?		200						
			200						
			200	06					
Have the Commod	lity Jurisdiction (CJ) or Commodity Classification (CC) prod	esses negative	ly impacte	ed vour s i	nace related	husingss?		Yes	No
riave the commod	inty durisdiction (OO) or Commodity Classification (OO) prot	C33C3 ricgative	iy iiripacit	ca your <u>s</u>	pace related		☑ here →	700	710
space related busin	xamples of the negative impacts on your ness resulting from Commodity Jurisdiction (CC) requests.								

18.b		EXPORT LICEN	ISING	CON	DITION	IS cont	inued					
Has your Compa	any/Business Unit received a Return	Nithout Action (RWA) from	om the U	.S. Fede	eral Gove	rnment?					Yes	No
								cł	neck 🗹 here	· 		
If "Yes,"							NA ibers				WA onale	
4) 11		10			Rece	eived	Resul	bmitted	Inadeo	quate	Pro	hibition
1.) How many R	WAs were <u>received</u> and <u>resubmitt</u>	<u>ea</u> ?	Ye	ear	ITAR	EAR	ITAR	EAR	ITAR	EAR	ITAR	EAR
2.) How many R	WAs were due to inadequate subr	nission or regulatory	20	003								
prohibition?				004								
				005								
Diagram and an and an	t halawaa aay athay aanaawaa yalat	ad to Datium Without Actio	_	006	inations							
Comments:	t below on any other concerns relat	ed to Return Without Actio	on (RVVA)	determ	inations.							
Comments.												
Please estimate	the <u>financial</u> <u>costs</u> <u>of</u> <u>complying</u>	with export controls, in t	erms of t	he follov	wing cate	gories, fr	om 2003	-2006.				
	Salaries/DECA*/Outside Legal	DTSA** Monitorin	na l		Complia	nce Trai	nina		Consulting	a Servic	es/Soft	ware
Year	(in \$ thousands)	(in \$ thousands)				thousands)				in \$ thous		
2003												
2004												
2005												
2006	t below on any other concerns or c	lifficulties related to the fi	inancial c	nete of a	romnliano	`A						
Comments:	t below on any other concerns of c	initedities related to the h	ilialiciai c	0313 01 (Joinplianc	<i>,</i> c.						
How would you return items? [modify the license requirements co Please respond in the comment box	ncerning <u>hardware</u> <u>repai</u> :.]	<u>r</u> /	nments:								
			Cor	nments:								
How would you (domestic and fo comment box.]	modify the license requirements co preign), insurance or phone calls?	ncerning <u>meetings</u> [Please respond in the	Con	nments.								
How would you	classify the <u>U.S.</u> Congressional ro	le in approving the sale of		Burde	nsome			omments:	:			
	products and/or services? [Please		ox.]	Not Ve	ery Burde Problem	nsome						
	nated Export Control Authorities			. 101 0								
SA is the Defer	se Technology Security Administration											

19.	9. COMPETITIVENESS FACTORS AND INDUSTRY OUTLOOK									
	BUSINESS	PROSPECTS								
	best describes your Company's/Business Unit's sp		10 years.							
	e Greatly ← [check Ø here]	Comments:								
	ove Some Same/Flat									
	Please explain your response in									
	the "comments" space provided.									
		\/E 0.041DETITI\/E\JE00								
Please describe the actions your Company/Business Unit has taken in the Last Comments:										
Please describe the actions your Company/Business Unit has taken in the <u>Last</u> Five Years to improve your competitiveness in the space market? Comments:										
Tive rears to improve your con	politivorioso in the space market:									
	FUTURE PLANS TO IMPRO	VE COMPETITIVENESS								
	r Company/Business Unit plans to take to	Comments:								
improve your competitiveness of	ver the <u>Next</u> <u>Five</u> <u>Years</u> .									
	U.S. GOVERNME	ENT ACTIONS								
Please indicate what actions in	olicy changes or regulatory reforms the Federal	Comments:								
	improve your Industry's and/or Company's/									
Business Unit's overall competit										
Have been about an in an and in a	EFFECT OF CHANGES IN GOV		noncia di mana ata di casa Camana any /D							
the following categories?	and allocations by U.S. Department of Defense (Do	DD), NASA, NOAA, and other a	gencies impacted your Company/Business Unit in							
Products and Services	Response →									
Personnel/Staffing	Response →									
Operations	Response →									
Please describe the strategies y	our Company/Business Unit has developed to resp	ond to the above issues.								
Response →										
	BARRIERS TO ENTRY IN FOREIGN COUNTRIES									
		# Country	Barrier to Entry							
I Please provide the FIVE most s	significant barriers to entry faced by your	1.								
		1 2 1								
Company/Business Unit when a	ttempting to market products in foreign	2.								
Company/Business Unit when a countries. [Note: List in order of		3.								
Company/Business Unit when a	ttempting to market products in foreign									

20.	20. FINANCIALS – INCOME STATEMENT FOR SPACE RELATED BUSINESS													
	Instructions: Organizations that operate as part of a larger company with non-space related business operations should provide <u>income</u> <u>statement</u> <u>data</u> <u>only</u> for their Space Related Business .													
Cor	porate Figures represented lines Unit Figures represen			← check Ø here										
My Company/Business Unit operates on a: ☐ here →														
Α.	Net Sales (and other reven			(, , , , , , , , , , , , , , , , , , ,	(, ,	(, , , , , , , , , , , , , , , , , , ,	()							
В.	Cost of goods sold	•												
C.	Gross Profit													
D.	Selling, general and admini	stration expenses												
E.	Depreciation													
F.	Total Operating Expens	ses												
Н.	Operating Income													
I.	Interest Expense													
	-													
J.	Other non-operating expens													
K.	Total Nonoperating Exp													
L.	Income before income taxe	s												
M.	Provision for income taxes													
N.	Net Income													

21.8						NCE SHE			
	ructions: Organizati de <u>balance</u> sheet d					with non-spac	e related busir	ness operation	s should
	oorate Figures repre			Telateo	Dusiness.				
	ness Unit Figures re			← Ch	neck 🗹 here				
	Tigares re		ted below						
	Company/Business U		Fiscal Year		2003	2004	2005	2006	2007 (est)
	ates on a: 🛮 🗹 he		Calendar Year		2000	2007			2007 (651)
	Current Assets (in \$	\$ thousan	ds)				<u> </u>	<u> </u>	
1.	Cash								
2.	Marketable securit								
3.	Accounts receivab	le, net							
4.	Inventories								
5.	Prepaid expenses								
6.	Other current asse	ts (pleas	· · · · · · · · · · · · · · · · · · ·						
7.			Total current a	ssets					
B. 8.	Non-Current Asset	•	,				 	<u> </u>	T
0.	Property, plant and Break out capital								
	evnenditures [Do). - Propei 1 0 Build	•						
	not double count		nings hinery & Equipment						
	PP&E in "Total 1 1 Non-Current	11 ////	miory & Equipment						
	Assets."]								
12.	Investments								
13.	Intangibles (patent	s, trade	marks, goodwill)						
14.	Less accumulated								
15.	Other assets (please	• • •							
16. 17.		<u>To</u>	otal non-current a						
	Lighilities and Own	oro' Er	Total a						
	Liabilities and Own Current Liabilities		· · · · · · · · · · · · · · · · · · ·						
18.	Accounts payable	(πη φ πιου	sanas)] 	 	<u> </u>
19.	Estimated tax liabil	lity (e.a.	income taves navable)					
20.	Accrued expenses		meome taxes payable,	,					
21.	Long-term debt (cu		ortion) due in 1 ve:	ar					
22.	Other current liabili			и .					
23.			Total current liab	ilities					
E.	Non-Current Liabili	ities (in	\$ thousands)						
25.	Long-term debt (les								
26.	Deferred income ta		· · · ·						
27.	Other long-term lia	bilities	(please specify)						
28.		Total	l non-current liab	ilities					
29.			Total liab	ilities					
F. (Owners' Equity (in \$	thousan	ds)						
30.	Common stock								
31.	Additional paid-in o	capital							
32.			Total paid-in ca	apital					
33.	Retained earnings								
34.	Less treasury stock	k (stock r	epurchase)						
35.			Total owners' e						
36.			s and Owners' Ed						
· *Note	: Please report any signif	ticant one	:-time events on the ne	xt nage o	of this survey				

21.b	FINANCIALS – BALANCE SHEET continued					
Reporting of Significant One-Time Events						
Corporate Events represented below ← Check ☑ here						
Business L	Jnit Events represented below					
Year	Instructions: Please provide an explanation of any significant one-time events that would skew					
700.	assessments of the economic performance of your Company/Business Unit.					
	Comments:					
2003						
2000						
	Comments:					
2004						
2004						
	Comments:					
2005						
	Comments:					
2006						
	Comments:					
2007(est.)						

22.	22.a EMPLOYMENT							
	OCCUPATIONAL BREAKDOWN – WORKFORCE – U.S.							
	For the years listed below, please provide the average number of <u>space-related</u> full-time equivalent employees (<u>35-40</u>							
	hours/week for a full 12 months) in your Company's/Business Unit's products/services operations.							
	Please fill in the table below as it corresponds only to your domestic operations and full-time equivalent workers.* Corporate Employment Figure represented below							
	iness Unit Employment Figures represented			← Ø here				
	Professional Occupation	2003 #	2004	2005 #	2006	2007 (est.) #		
1.	Administrative Staff (Front Office)							
2.	Production Managers/Supervisors							
3.	Development Staff							
4.	Research Staff							
5.	Production Line Workers							
6.	Support Technicians							
7.	Quality Control							
8.	Test Operators							
9.	Export License Personnel (ITAR & EAR)							
10.	Sales and Marketing							
11.	Operations and Maintenance							
12.	Other							
13.	Total Employment*							
			0004	0005				
	Education Level	2003 #	2004 #	2005 #	2006 #	2007 (est.) #		
14.	BA/BS degree only							
15.	Master's educated level							
16.	PHD educated level							
17.	Total Degree Staff							
	From 2003 through 2007, were personnel related to your space business permanently terminated or Yes No							
furloughed as a result of denials and/or processing delays of export license applications? ☑ here →								
	Furloughed & Terminated	2003 #	2004 #	2005 #	2006 #	2007 (est.) #		
18.	Furloughed Due to Export Controls							
19.	Total Furloughed (all operations)							
20.	Terminated Due to Export Controls							
21. Total Terminated (all operations)								
	*Total need not include all categories if there are personnel redundancies listed. ** Full-time equivalent refers to part-time workers who, in the aggregate, work a 35-40 hour work-week (e.g., 10 part-time employees working 20							
	hours/week for a full 12 month period each are the full-time equivalent of five full-time employees for that 12 month period).							

No
ase

RESEARCH AND DEVELOPMENT

Instructions: Companies/organizations whose sole focus is space-related products should report Corporate-wide R&D

23.a

expenditures. Those companies/organizations that are part of a larger company with other non-space related business operations should report R&D expenditure figures only at the space-related Business Unit level. Please specify whether							
Corporate R&D figures or Business Unit R&D figures with a check ☑ in the corresponding box.							
SDACE DELATED DAD EXPENDITURES DV FUNCTION							
SPACE-RELATED R&D – EXPENDITURES BY FUNCTION							
Corporate R&D ← check ☑	here						
Business Unit R&D							
R&D Expenditures Supporting Space Related Activities (in \$ thousands)							
CATEGORY	2003	2004	2005	2006	2007 (est.)		
Basic Research							
Applied Research							
Product Development							
Process Development							
Total R&D							
23.b SPACE-RELATED	R&D - FUN	IDING SEG	MENT BY S	SOURCE			
23.b SPACE-RELATED Corporate R&D Business Unit R&D ← check ☑		IDING SEG	MENT BY	SOURCE			
Corporate R&D ← check ☑	here nding Sources fe			SOURCE			
Corporate R&D ← check ☑	here nding Sources fe	or Space Relate		2006	2007 (est.)		
Corporate R&D Business Unit R&D	here nding Sources fo (in \$ th	or Space Relate	ed Activities		2007 (est.)		
Corporate R&D Business Unit R&D	here nding Sources fo (in \$ th	or Space Relate	ed Activities		2007 (est.)		
Corporate R&D Business Unit R&D	here nding Sources fo (in \$ th	or Space Relate	ed Activities		2007 (est.)		
Corporate R&D Business Unit R&D CATEGORY Parent Company (internal) Federal Government	here nding Sources fo (in \$ th	or Space Relate	ed Activities		2007 (est.)		
Corporate R&D Business Unit R&D CATEGORY Parent Company (internal) Federal Government State and Local Government U.S. Private Entity [Includes industry, universities, and all other non-governmental]	here nding Sources fo (in \$ th	or Space Relate	ed Activities		2007 (est.)		
Corporate R&D Business Unit R&D CATEGORY Parent Company (internal) Federal Government State and Local Government U.S. Private Entity [Includes industry, universities, and all other non-governmental organizations.] Foreign Investors [Includes private, industry, governments, and universities.] Other (please specify in box below)	here nding Sources fo (in \$ th	or Space Relate	ed Activities		2007 (est.)		
Corporate R&D Business Unit R&D CATEGORY Parent Company (internal) Federal Government State and Local Government U.S. Private Entity [Includes industry, universities, and all other non-governmental organizations.] Foreign Investors [Includes private, industry, governments, and universities.]	here nding Sources fo (in \$ th	or Space Relate	ed Activities		2007 (est.)		

24. CERTIFIC	ATION
The undersigned certifies that the information he is complete and correct to the best of his/her known make a false statement or representation to any Government as to any matter within its jurisdiction.	owledge. It is a criminal offense to willfully department or agency of the United States
Company Name	
Company's Internet Address	
Name of Authorizing Official	
Title of Authorizing Office	
Email Address	
Phone Number and Extension	
Date Certified	
If POC is different than above named, include below	
Point of Contact Name	
Title of Point of Contact	
Email Address	
Phone Number <u>and</u> Extension Please check ☑ if you would like a free copy of	the final report. ← Ø here
In the box below, please provide any additional of to include regarding your space related products issues. Comments →	comments or any other information you wish

[End]