

ISCe

Satellite &
Communications

a CeBIT Event

ISCe 2008

DISA Overview

Speaker:

Rebecca Cowen-Hirsch

Director, SES, PEO-STS –

DISA, Program Executive Office SATCOM Teleport & Services

Organizers



Hannover Fairs USA, Inc.

Co-Hosts



**Defense Information Systems Agency
Department of Defense**

ISCe 2008: Access to SATCOM for the Next Decade

**Ms Rebecca M. Cowen-Hirsch
PEO for SATCOM, Teleport, and Services
11 June 2008**

The DISA Strategy

Information

Best
Value

Power to
the Edge

Speed

Operational
Excellence

*We are limited, not by our abilities, but by our **vision***

DoD's Evolving Commercial SATCOM Strategy

1990

2000

2010



CSCI
(1993)

MTC
(1995)

DSTS-G
(2001)

Future Commercial
SATCOM Services
Acquisition (2010)

Description

- Pilot strategy to lease transponders and earth terminals with network management to satisfy non-essential SATCOM

- Single vendor award to lease/manage commercial bandwidth in full transponder, full year increments

- Three small business integrator awards to lease fractional transponders for any period of time

To be determined...

Findings

- Three vendors conducted demonstrations and recommended acquisition, transition, logistics, and host nation approval plan as per resulting MTC

- Inability to lease partial transponders led to unacceptable operational delays
- Prices high due to absence of competition and incentives

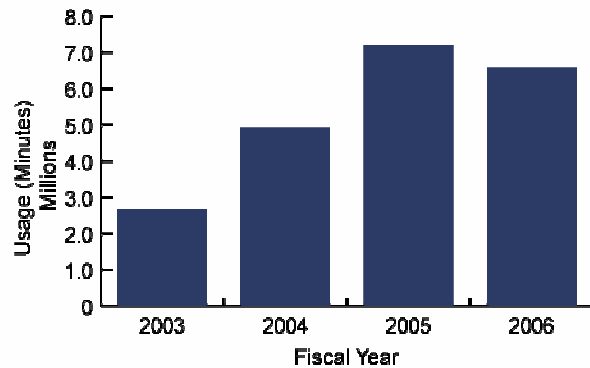
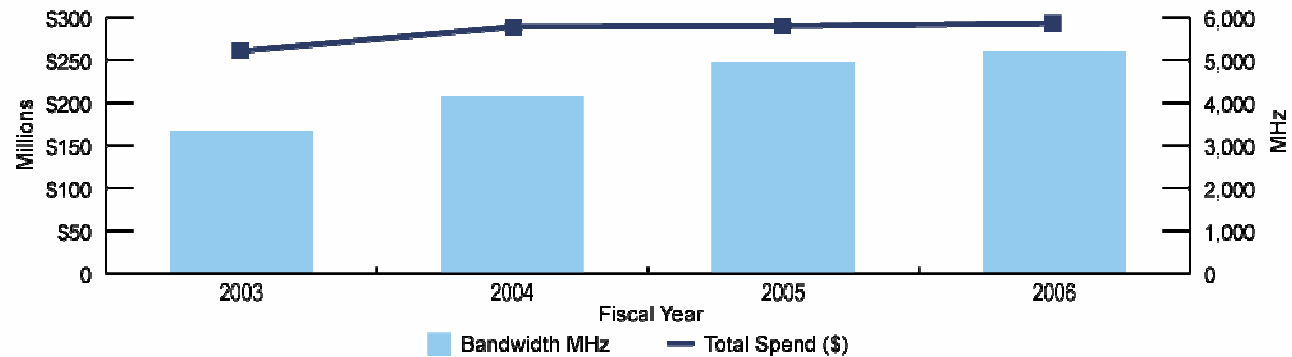
- Competition between vendors and satellite operators resulted in good pricing
- Effective construct given market conditions

To be determined...

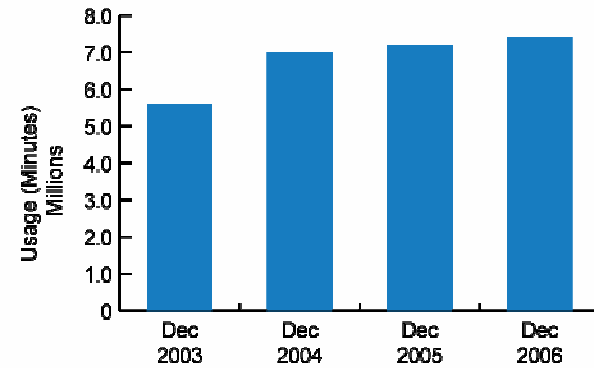
DISA

DoD Commercial Usage Reflects Increased Dependence

DoD Commercial FSS Expenditures and Usage



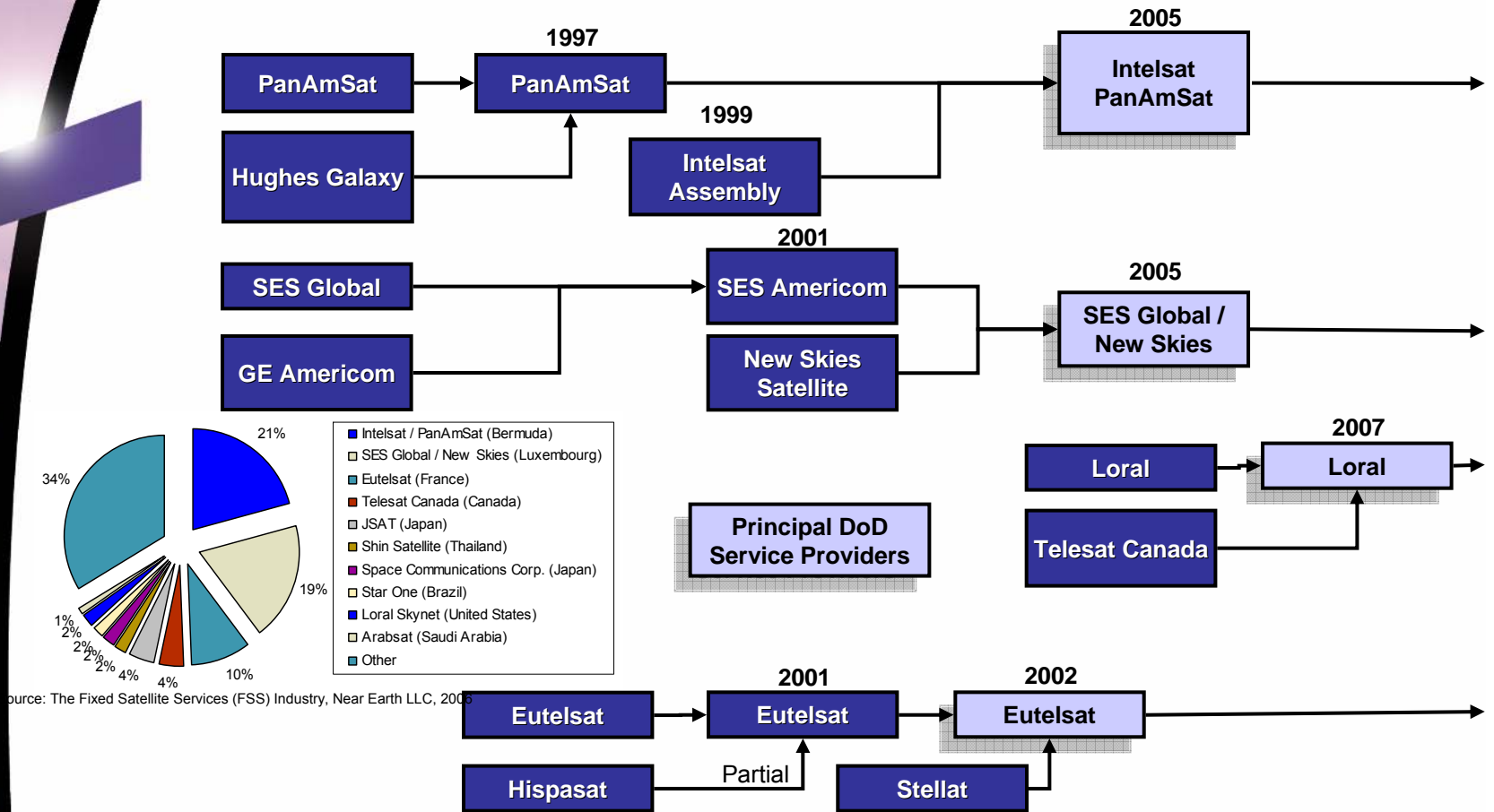
DoD MSS (Inmarsat) Usage (DISA Contract)



DoD EMSS (Iridium) Usage

DoD fixed and mobile commercial SATCOM usage has steadily increased in recent years

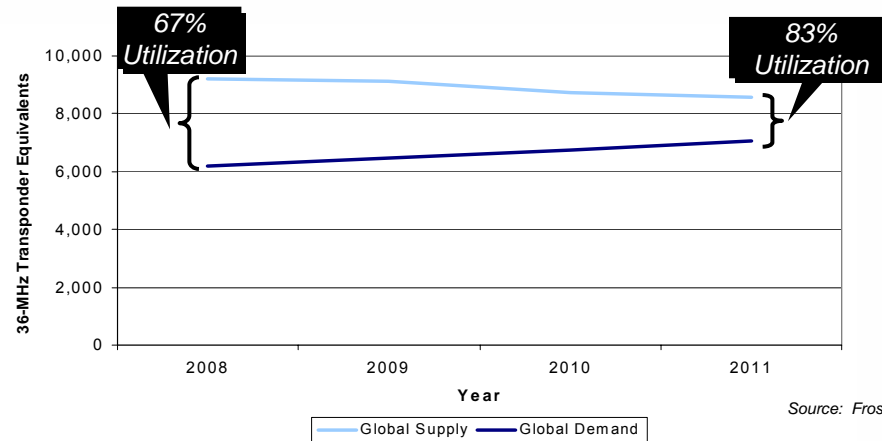
Industry Consolidation



Industry consolidation will drive higher utilization targets and possibly lead to monopolistic factors

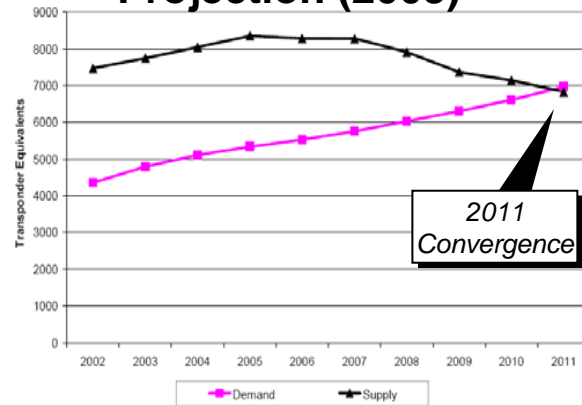
Global Utilization, Supply & Demand

Increasing Global Utilization

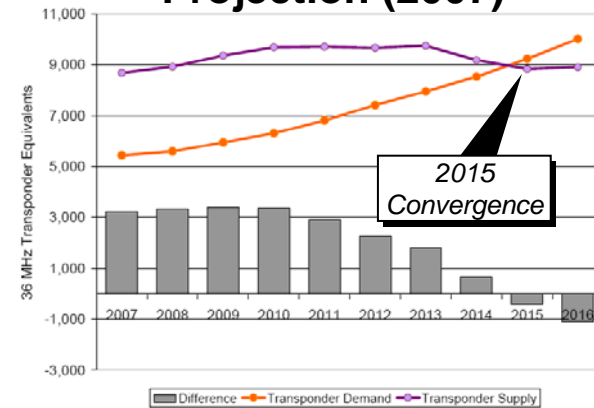


Source: Frost & Sullivan, DISA analysis

Futron Supply and Demand Projection (2003)



Futron Supply and Demand Projection (2007)

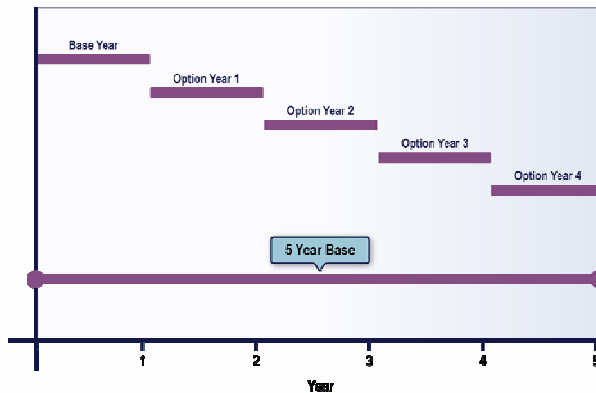


Global supply and demand is tightening, but will economics really allow a long-term convergence?

What Industry Wants

Strategy, Planning & Partnership

- Clarify USG commitment to use of commercial satellites
- Forecast DoD demand trends to ensure future availability of commercial capacity

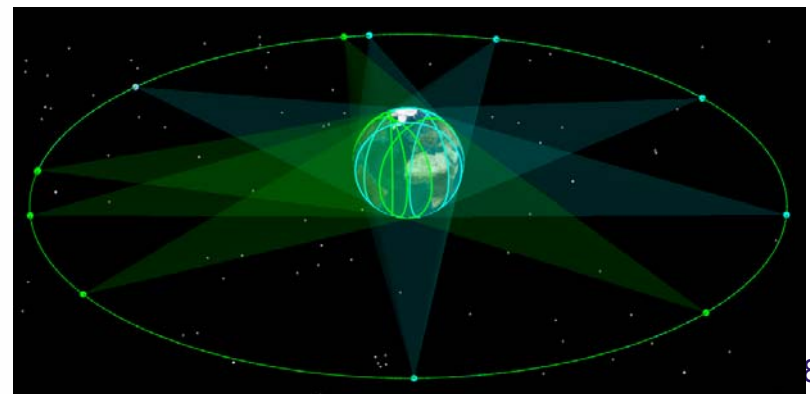


Contracting and Commitment

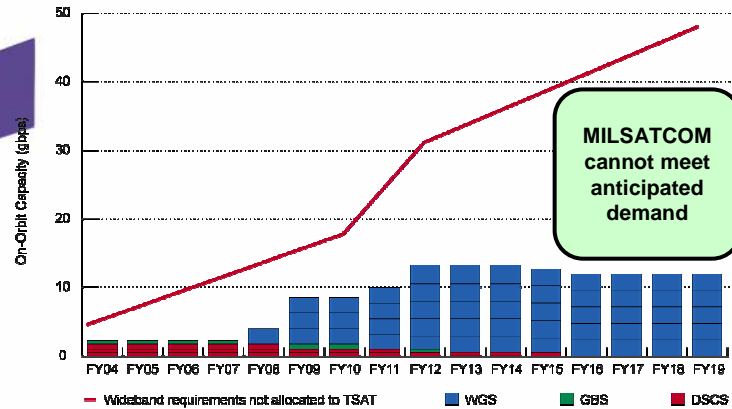
- Utilize multi-year procurement mechanisms to fund forecasted DoD commercial requirements
- Develop policies/procedures for improved security measures for operators with multi-national operations

Building Operational Flexibility

- Incorporate commercial assets into DoD fleet to increase flexibility and redundancy, and reduce the risk of major loss of capability

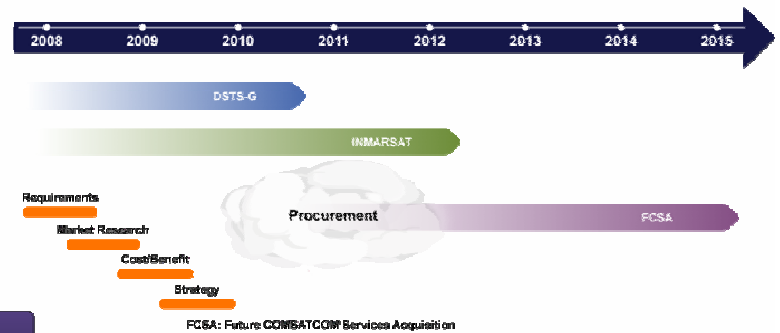


Future COMSATCOM Services Acquisition



DoD's SATCOM usage continues to increase in support of DoD's net-centric approach to warfare

Satellite Service Contracts

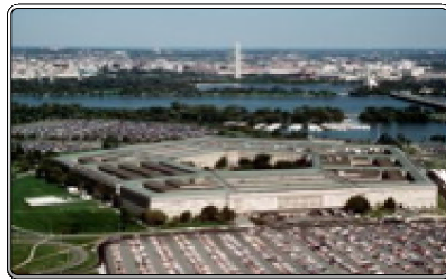


Objectives

- Satisfy revalidated Joint Staff capabilities
- Provide Warfighters with a flexible, best value mechanism
- Takes advantage of future industry and user trends

Operational Flexibility is key to meeting the unique and changing needs of military users

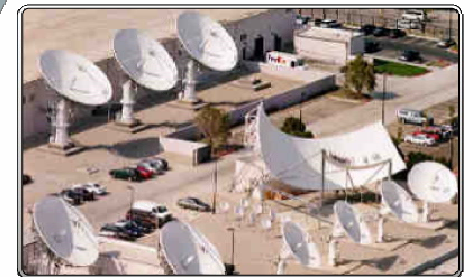
Industry and DoD Partnership



Information

DoD Strategy/
Requirements

Industry
Capabilities



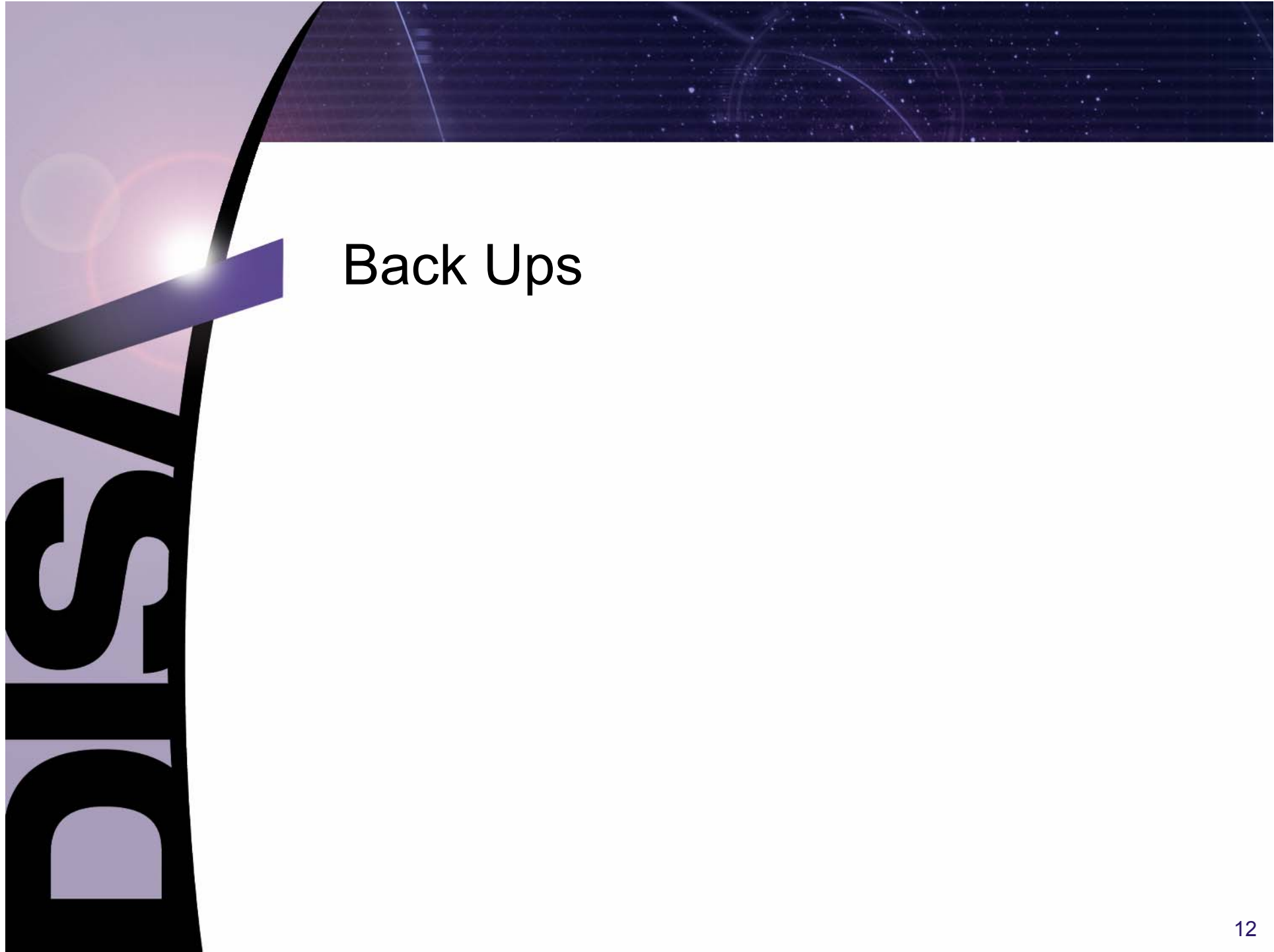
*DISA and Industry ... together ...
meeting DoD's SATCOM needs*



DISA

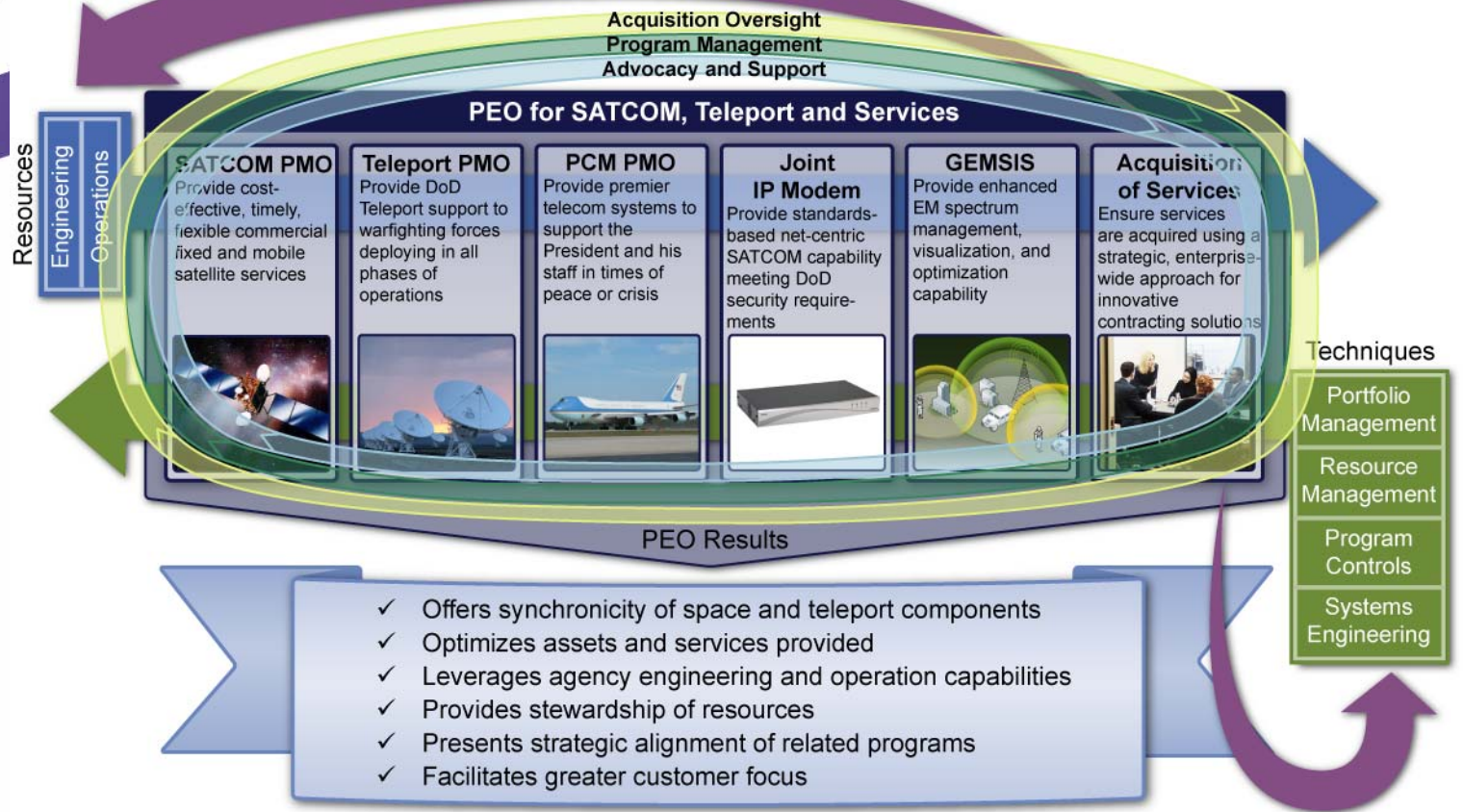


www.disa.mil



Back Ups

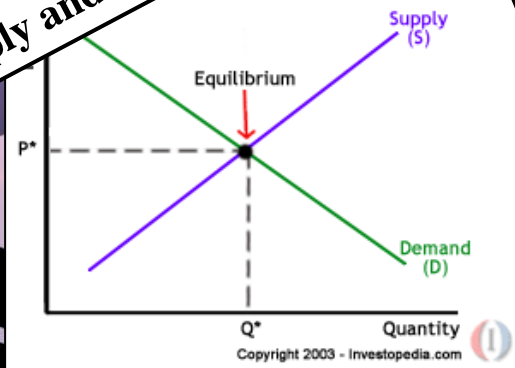
PEO SATCOM, Teleport & Services



Ready.... Reliable.... Relevant

Considerations for the Future

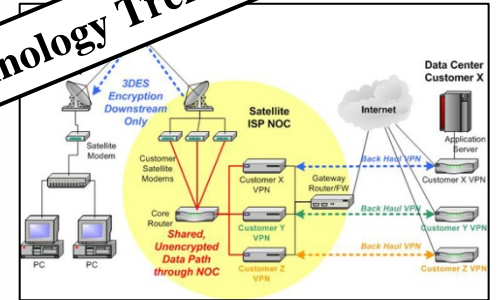
Supply and Demand



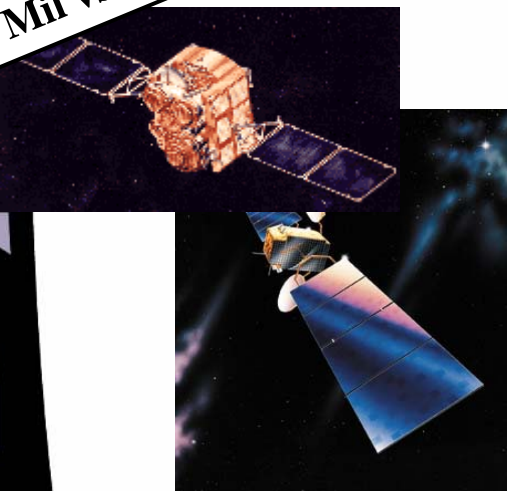
Industry Desires



Technology Trends



Mil vs Commercial



Industry Trends



Law and Policy



Funding



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*A Leading Provider of Investment, Merchant Banking and Advisory Services
to Companies and Investors in the Satellite, Media and Telecom Sectors*

The View from Wall Street & DISA

prepared for

ISCe 2008

June 2008

Financial Health of Satcom

- **FSS Operators**
 - Global commercial demand for capacity generally strong despite economy
 - Video distribution tends to be recession resistant
 - Government demand has been strong and important
 - Mostly benefitting largest fleet operators
 - Investor concern about future demand
 - Congressional review of DISA
 - Post Iraq
 - Post launch of government owned assets (e.g. WGS)
- **MSS Operators**
 - Commercial health of many MSS operators in question
 - Particularly with LEO fleet replacements and funding of ATC systems
 - Government use helpful, but not sufficient to make operators profitable
 - Still waiting for government sponsorship of national systems for Homeland Security
 - COTM threatens future
- **Satcom Ground Segment Companies**
 - Very fragmented, mostly small-cap other than aerospace primes and lead subcontractors
 - Easier today to start a Satcom related company, harder to grow to critical scale for good ROI
 - Consolidation of 2nd and 3rd tier Satcom related contractors gaining momentum
 - Leading antenna, equipment and component manufacturers
 - DSTS-G Players acquired (SpaceLink and Arrowhead) or in play (Artel)

Public Market Analysis

(as of Friday, June 6th, 2008)

Large-Cap Space and Defense

(\$, in millions, except per share price)

Company	52 Week		Market Cap	EV	Close Price	Performance			P/E	
	Low	High				3 Month	6 Month	12 Month	TTM	2008E
Boeing	\$71.58	\$107.83	\$54,980.00	\$56,740	\$73.16	-3%	-16%	-21%	12.7	10.5
General Dynamics Corp	70.61	95.13	34,530	35,910	86.65	8%	-4%	14%	16.0	13.3
Honeywell International Inc	52.05	62.99	40,050	47,860	54.01	-1%	-3%	-1%	16.1	12.6
I.T.T. Industries	50.94	73.44	11,470	13,410	63.12	18%	0%	-2%	15.0	13.7
Lockheed Martin Corp	88.86	113.74	41,500	45,030	103.75	3%	-3%	11%	14.3	12.6
Northrop Corp	68.44	85.21	24,530	29,110	71.70	-6%	-10%	-2%	15.0	11.5
Raytheon Co	52.28	67.49	25,380	26,170	60.56	-4%	-4%	9%	10.1	13.6
L-3 Communications Holdings Inc	90.11	115.33	12,020	16,340	98.01	-5%	-11%	5%	15.7	13.1
United Technologies	65.20	82.50	65,210	74,970	67.01	2%	-10%	0%	15.0	12.3
Median			34,530	35,910		-1%	-4%	0%	15.0	12.6

Mid-Cap Space and Defense

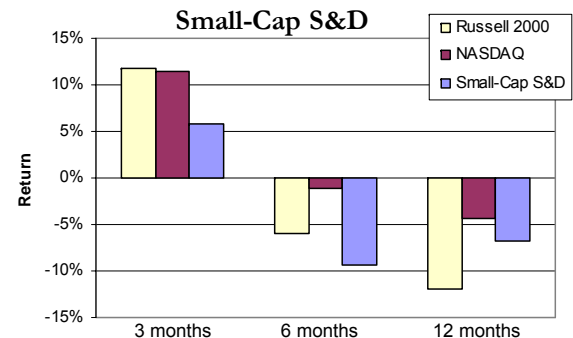
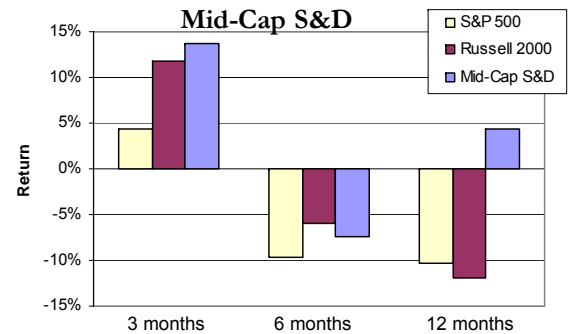
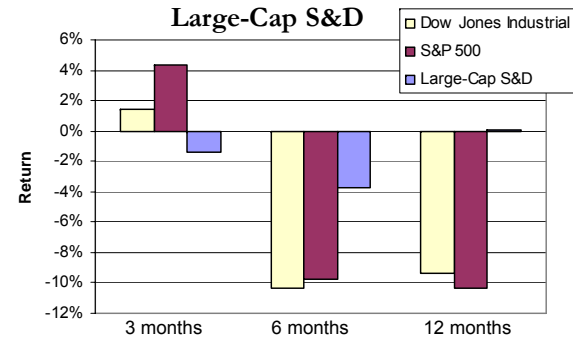
(\$, in millions, except per share price)

Company	52 Week		Market Cap	EV	Close Price	Performance			P/E	
	Low	High				3 Month	6 Month	12 Month	TTM	2008E
Alliant Techsys	\$95.00	\$120.90	\$3,390.00	\$4,840	\$103.40	3%	-11%	6%	16.1	12.6
Ball Corp	40.23	56.20	5,090	7,940	52.08	22%	17%	0%	18.6	12.1
DRS Technologies Inc	44.11	79.35	3,250	4,880	78.60	35%	29%	50%	24.4	17.5
FLIR Systems Inc	19.79	40.43	5,160	5,570	37.55	55%	19%	96%	NM	26.4
Goodrich Corp	55.89	75.74	6,990	8,500	55.89	-5%	-22%	0%	13.2	11.0
Harris Corp	44.11	66.94	7,700	8,270	57.19	20%	-9%	13%	19.2	14.0
Moog (Class A)	37.20	49.42	1,770	2,450	41.50	8%	-6%	3%	16.5	13.1
Rockwell Collins Inc	53.24	76.00	8,950	9,820	55.66	1%	-21%	-16%	14.9	12.3
Median			5,125	6,755		14%	-7%	4%	16.5	12.8

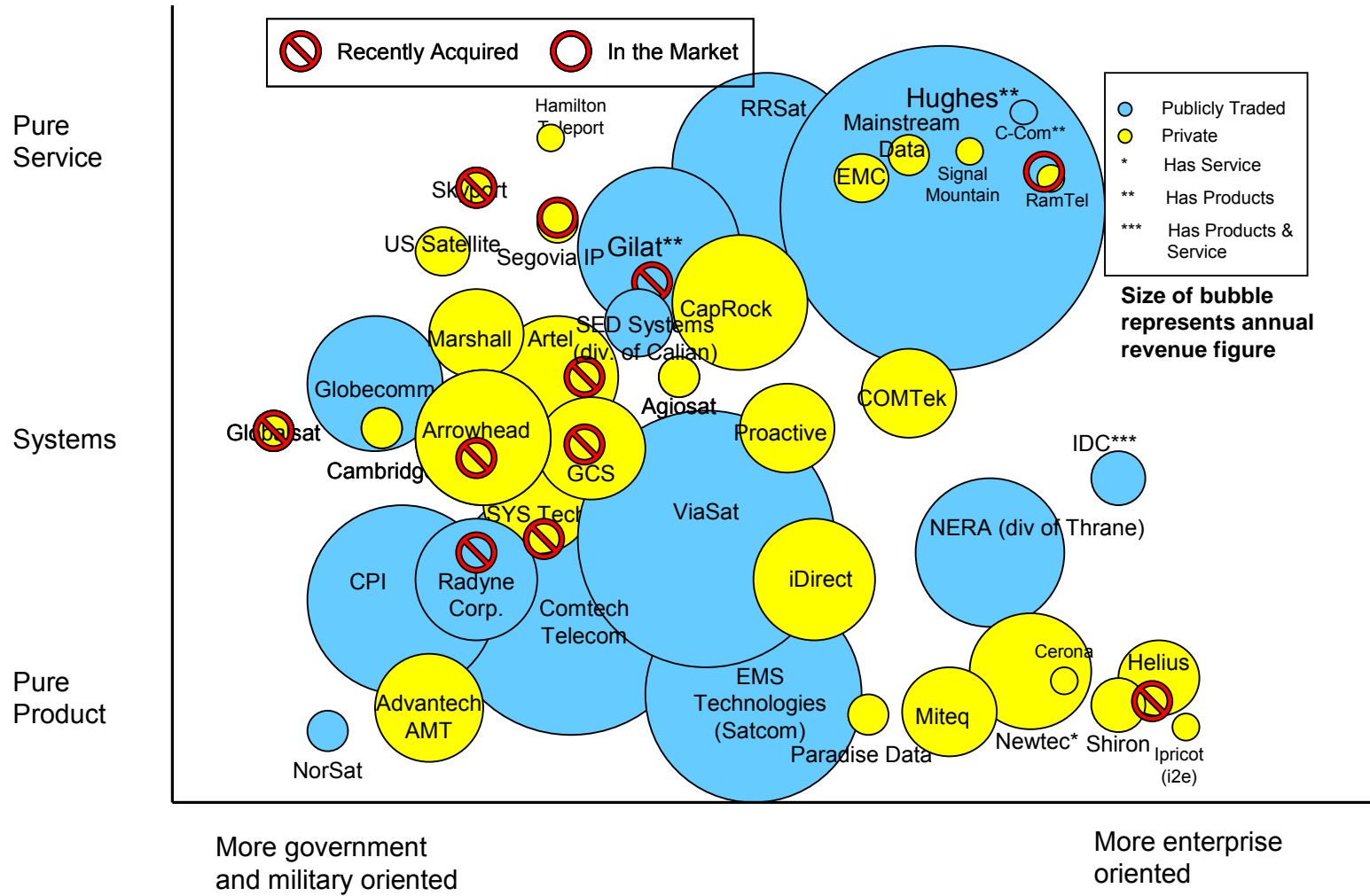
Small-Cap Space and Defense

(\$, in millions, except per share price)

Company	52 Week		Market Cap	EV	Close Price	Performance			P/E	
	Low	High				3 Month	6 Month	12 Month	TTM	2008E
Comtech Telecommunications Corp	\$35.45	\$58.00	\$1,200.00	\$972.02	\$49.52	6%	0%	11%	17.8	17.4
CPI International Inc	8.80	21.50	216	442	13.08	32%	-25%	-34%	11.9	9.3
EMS Technologies Inc	19.60	33.23	425	317	27.24	3%	-12%	36%	20.7	17.2
GeoEye Inc	16.05	37.37	311	346	17.30	-49%	-44%	-16%	4.9	32.0
GenCorp Inc	7.72	13.97	433	822	7.60	-26%	-35%	-40%	10.2	10.7
Gilat Satellite Networks Ltd	8.35	11.34	433	315	10.90	4%	4%	12%	NM	N/A
Globecomm Systems Inc	7.77	16.49	212	159	10.50	19%	-9%	-27%	15.2	17.2
Hughes Communications Inc	42.00	61.00	1,030	1,490	48.19	6%	-11%	-11%	22.5	16.1
Integral System Inc	20.84	39.92	311	305	36.72	37%	62%	50%	18.8	16.8
KVH Industries Inc	6.69	10.69	127	79	8.76	4%	0%	-3%	32.4	18.3
Orbital Sciences Corp	19.19	27.88	1,410	1,410	24.15	9%	5%	27%	24.9	22.6
TeleCommunication Systems Inc	2.71	5.77	213	211	5.03	69%	53%	-7%	NM	10.7
ViaSat Inc	19.06	36.49	696	572	22.00	6%	-35%	-30%	21.2	12.2
Median			425	346		6%	-9%	-7%	18.8	17.0



Ground Systems Competitive Landscape



Recent M&A Transactions

Announce Date	Acquiror	Target	Value	Valuation
12/06	Loral	Telesat	\$4 Billion	7.1x Sales; 13.4x EBITDA
2/07	Caprock	Arrowhead	Not disclosed	
4/07	Globecomm	Globalsat	\$18.4 million	0.9x Sales
4/07	L-3	GCS	\$153 million	1.7x Sales
5/07	Cobham plc	Patriot Antenna Systems	\$18 m + E-out	
6/07	BC Partners	Intelsat (76% stake)	\$17 Billion	7.7x Sales; 11.3x EBITDA
7/07	Radyne	AeroAstro	\$18.0 million	
8/07	Abertis Telecom	Hispasat (28.4% stake)	\$199 million	5.8x Sales; 7.9x EBITDA
1/08	SES Global	Spacecom	REJECTED	
1/08	Alliant Techsystems	MDA Satellite Div.	BLOCKED	CD\$1.3 billion offer; 2.7x Sales
2/08	Kratos	SYS Technologies	~\$50 million	0.6x Sales
2/08	JSAT	Space Communications Corp.	Not disclosed	
3/08	Mivtach Shamir Holdings	Gilat Satellite Network	\$475 million	38% premium
3/08	Transdigm Group	CEF Industries	\$83 million	2.8x Sales
5/08	Comtech	Radyne	\$195 million	33% premium, 1.3x Sales
5/08	Finmeccanica S.p.A.	DRS Technologies	\$5.2 Billion	32% prem, 1.8x Sales, 13.6x EBITDA
5/08	Cobham plc	M/A-Com's RF components unit	\$425 million	0.9x Sales, 6.8x EBITDA

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President
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June 11, 2008

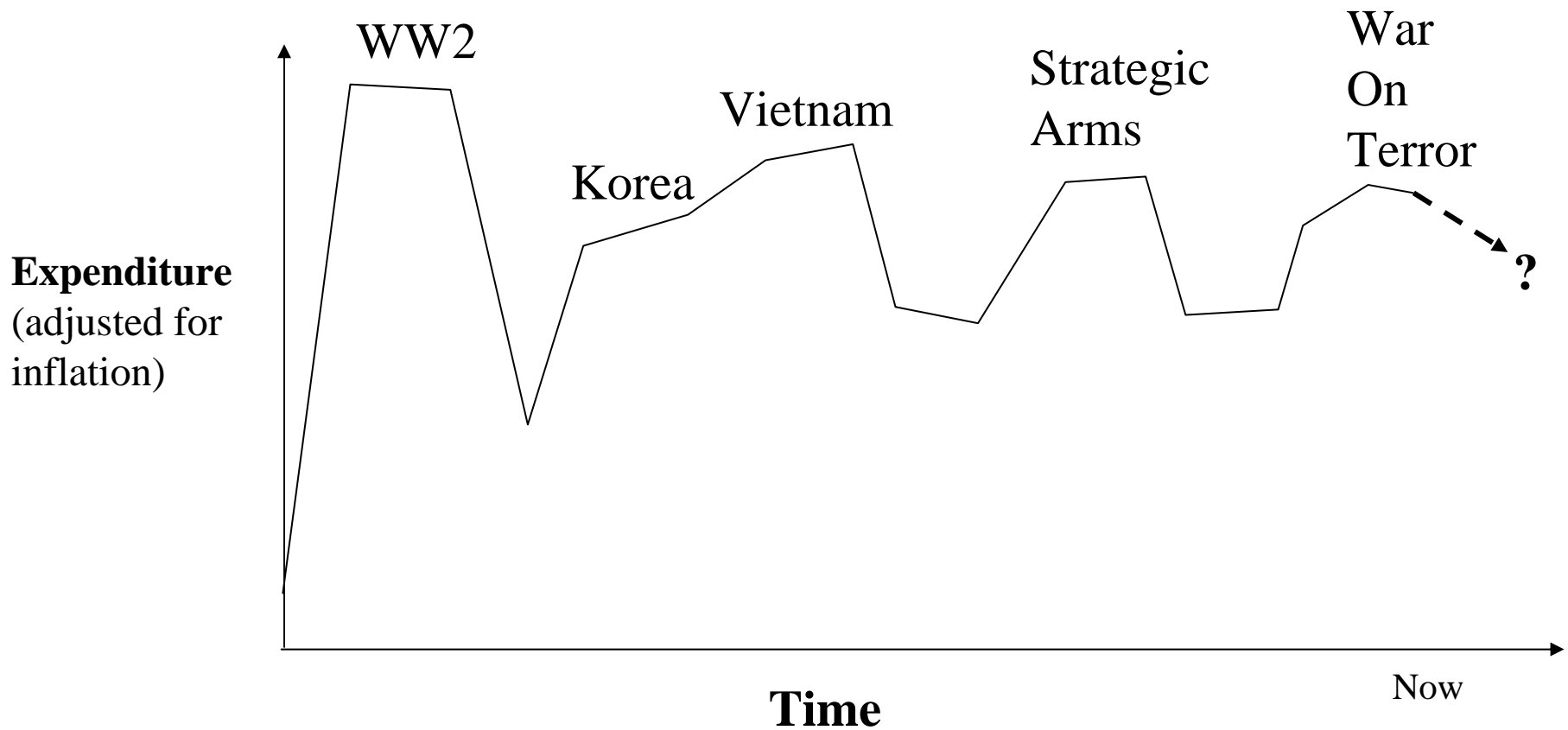


War and Peace

- 1939 – 1945 World War Two
- 1946 – 1949 Post War Period
- 1950 – 1951 Korean War
- 1948 – 1964 Cold War (Stalin, Khrushchev, Mao)
- 1963 – 1975 Vietnam War
- 1975 – 1980 Post Vietnam
- 1981 – 1990 Cold War (Reagan, Gorbachev)
- 1991 – 2000 Peace (Fall of Berlin Wall, Balkans,)
- 2001 – 2008 War on Terror (9/11, Afghanistan, Iraq)
- 2009 – ? Moving Forward



Macro Cycles (Notional)



Trends

- Success in the War on Terror
- Reduced outlays in ME and HLS in coming years (hopefully)
- Reliance on intelligence gathering
- Strategic focus and threats
- Greater ability to respond anywhere, anytime



With Respect to MiSatCom

- “80/20 Rule” to give way to efficiency and greater reliance on new assets (WGS, MUOS, etc.)
- FSS operators always benefit from diverse businesses (commercial and government)
- Teleport and VSAT providers currently dependent on government contracts may likewise endure through diversity



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ISCe – The Satellite Industry & Wall Street



Chris Quilty

Senior VP, Equity Research

Chris.quilty@raymondjames.com

June 11, 2008

RAYMOND JAMES[®]

Wall Street View of the Satellite Industry

- ▶ Macro Trends Appear Favorable
- ▶ Market Window Open Once Again
- ▶ Impact of Credit Crisis?

Macro Trends Appear Favorable

- ▶ High definition TV (HDTV)
- ▶ Consumer satellite broadband
- ▶ Digital signage
- ▶ Cellular backhaul
- ▶ Mobile satellite services (MSS)
- ▶ Disaster recovery

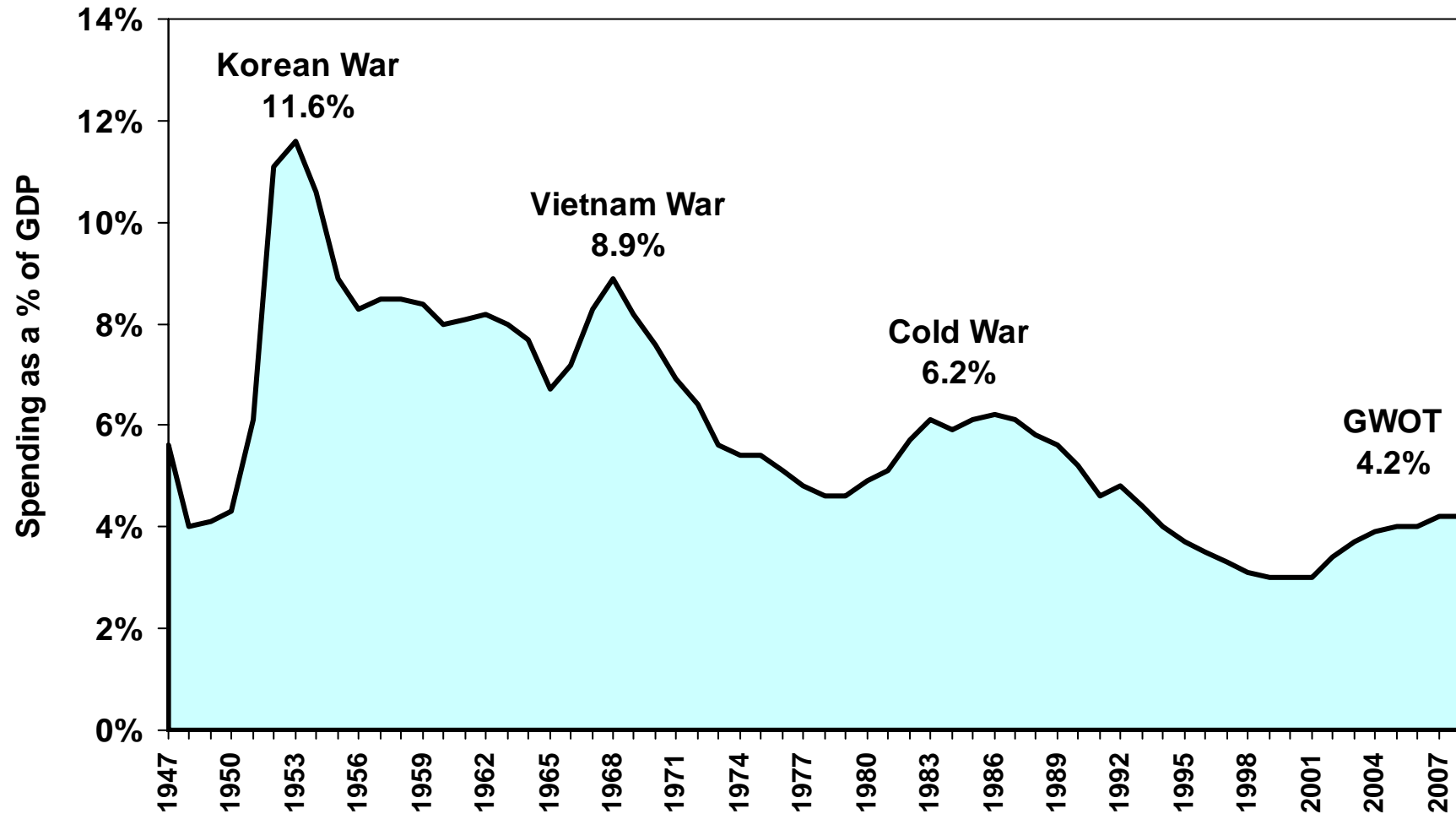
▶ **MILSATCOM**

- Demand up exponentially
- Supply broken

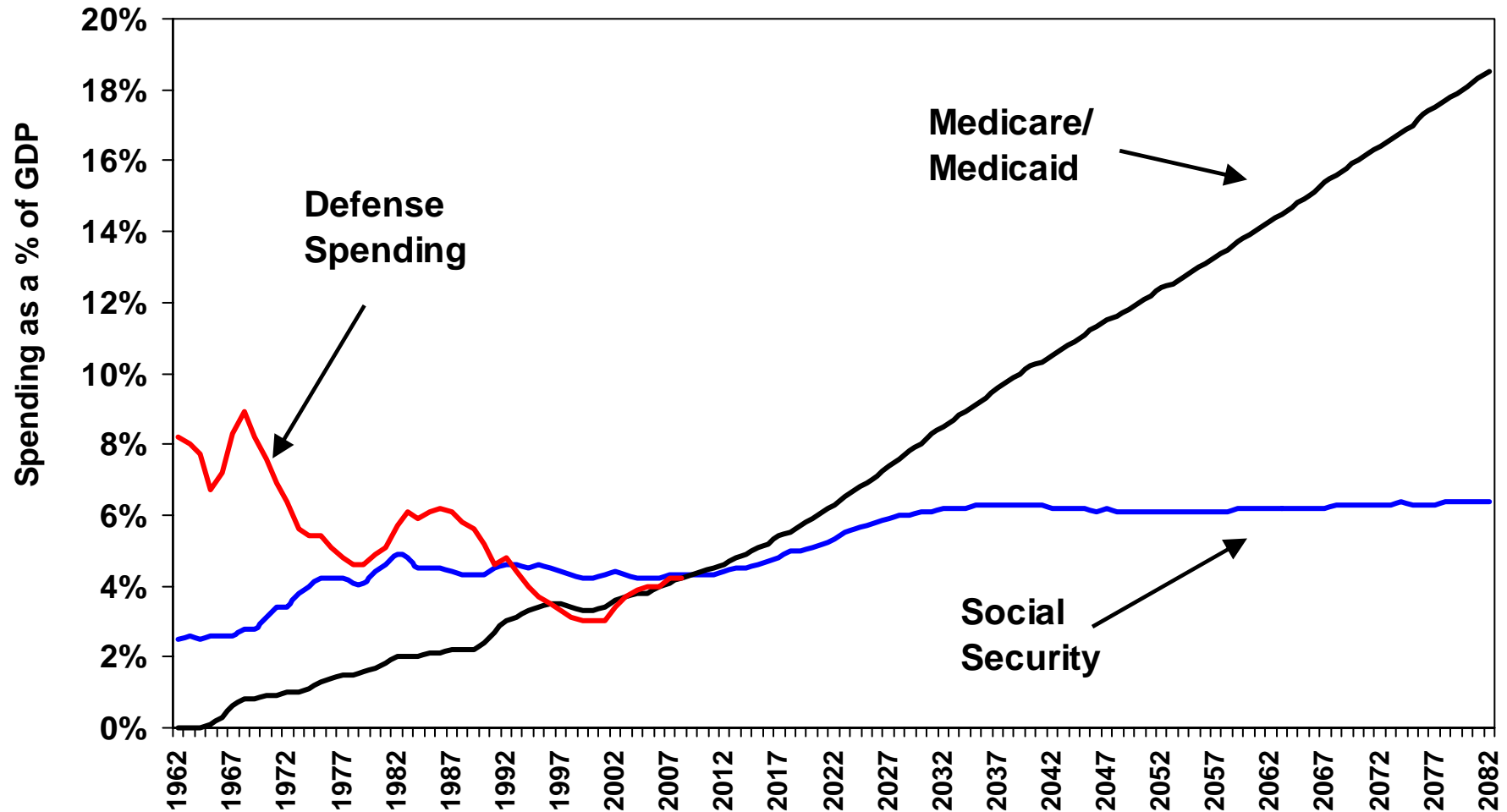


Commercial

Are We Starving Defense?



Starve Defense or Starve Granny?



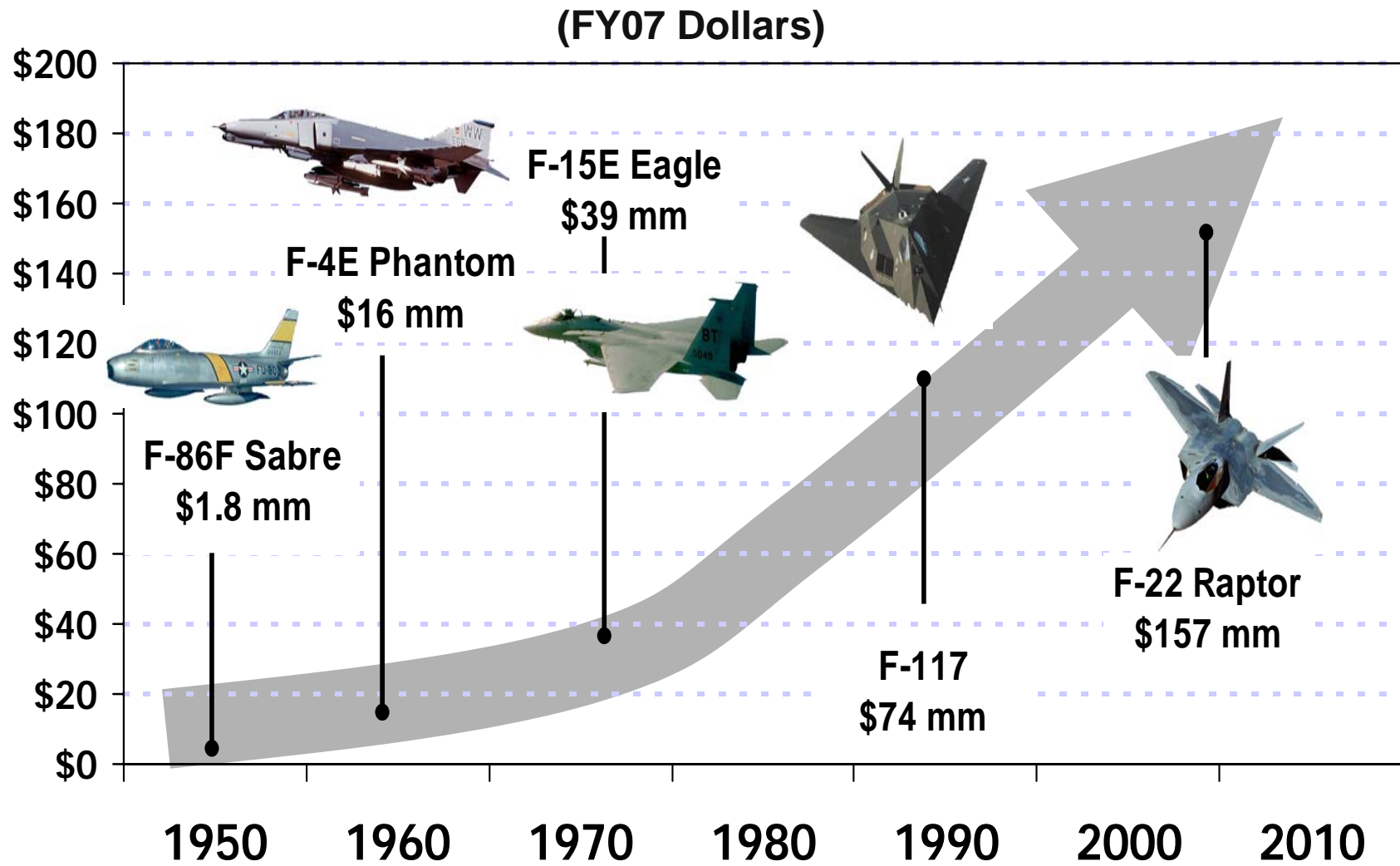
Getting Worse, Not Better

Major Defense Acquisition Programs (FY08 dollars)

	2000 Portfolio	2007 Portfolio
Portfolio Size		
# of programs	75	95
Planned commitments	\$790 B	\$1,600 B
Commitments outstanding	\$380 B	\$858 B
Portfolio Performance		
RDT&E change	+27%	+ 40%
Total acqn cost change	+6%	+26%
Est cost growth	\$42 B	\$295 B
Programs 25% over	37%	44%
Average delay	16 months	21 months

Exponential Cost Increases

(Note: Flyaway cost, ex-RDT&E)



Wall Street View of the Satellite Industry

- ▶ Macro Trends Appear Favorable
- ▶ **Market Window Open Once Again**
- ▶ Impact of Credit Crisis?

Market Window Open Once Again

- ▶ IPO activity picks up
 - 5 IPOs since 2006 – HUGH, RRSat, ORBC, CPII, GSAT
 - ~\$412 million raised
- ▶ Secondary offerings (equity)
 - 4 transactions since 2006
 - ~\$220 million raised – HUGH, ORBC, GCOM, RADN
- ▶ Expanding Wall Street coverage
- ▶ Private equity transactions

Wall Street View of the Satellite Industry

- ▶ Macro Trends Appear Favorable
- ▶ Market Window Open Once Again
- ▶ **Impact of Credit Crisis?**

Impact of Credit Crisis?

- ▶ Capital intensive industry
- ▶ Mature companies generate cash
- ▶ Substantial new capital required
 - ATC companies
 - ViaSat, Hughes Ka-band programs?
 - SatPhones – Iridium, Globalstar
- ▶ A short-term or long-term problem?
 - Can companies “bridge the gap?”
 - Hosted payloads vs the XTAR model?
 - Private equity to the rescue?

Satellite Industry Financial Characteristics



Payload



Launch



Operators



Ground Equipment

	Payload	Launch	Operators	Ground Equipment
Capital investment	High	High	High	Low
Number of competitors	Low	Low	Moderate	High
Current pricing trend	Static	Increasing	Static	Declining
Industry revenue*	\$11.3 B	\$5.3 B	\$9.2 B	VAR*
Target EBITDA	10 -20%	Variable	70-80%	10-25%**
Rate of technical change	Slow	Glacial	N/A	Rapid
Industry 5-year CAGR	0%	10%	~6%	5-20%**
Forecasted M&A activity	Low	Low	Low/Moderate	Moderate/High
Typical level of debt	Moderate	Low	High	Low
Barriers to entry	High	High	High	Low
3-year revenue visibility	High	High	High	Low/Moderate
Industry growth drivers	<ul style="list-style-type: none"> ▶ LEO upgrades ▶ Ka-band ▶ Developing markets ▶ MILSATCOM 	<ul style="list-style-type: none"> ▶ Direct-to-home ▶ LEO upgrades ▶ Developing markets ▶ Moon race 	<ul style="list-style-type: none"> ▶ HDTV ▶ # channels ▶ Cellular backhaul ▶ Direct-to-home 	<ul style="list-style-type: none"> ▶ HDTV ▶ MSS services ▶ Consumer broadband ▶ MILSATCOM

*Variable. Depends on market definition.

**Varies widely by niche

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