

NDIA 48th Annual Fuze Conference
Guidance Integrated Fuze / Course
Correcting Fuze (GIF)
(CCF)



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CCF DPO



GIF & CCF



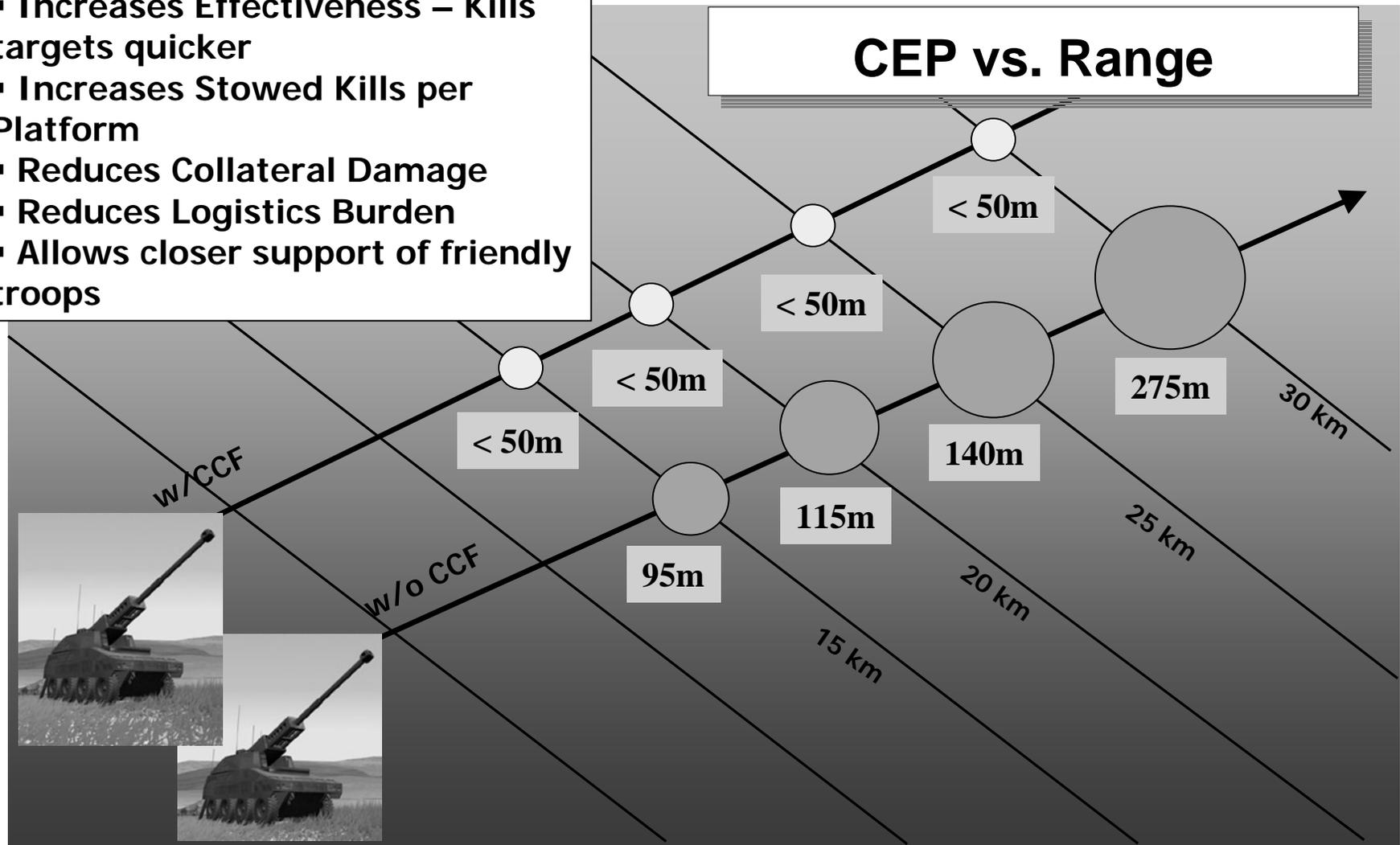
- GIF is a Technology Demonstration Program at NSWCDD Sponsored by OSD-ATL
- GIF is being co-developed by the Army & Navy as the design concept for the Army CCF Program
- US Army is developing a requirement for CCF. OPM CAS is the developer for USAFAS



Benefits of CCF



- Increases Effectiveness – Kills targets quicker
- Increases Stowed Kills per Platform
- Reduces Collateral Damage
- Reduces Logistics Burden
- Allows closer support of friendly troops



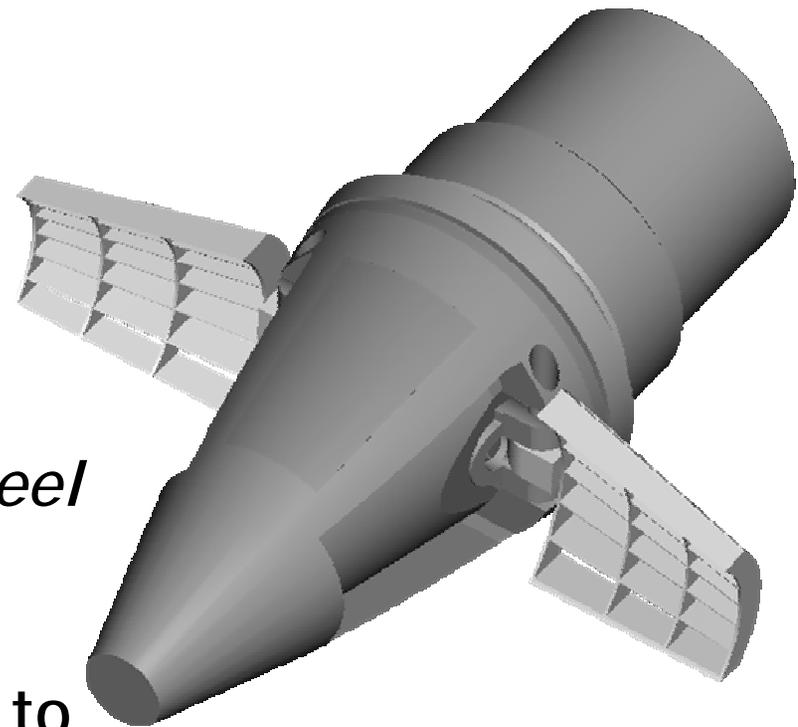
(Major Improvements to Cannon Artillery Effectiveness)



What is GIF?

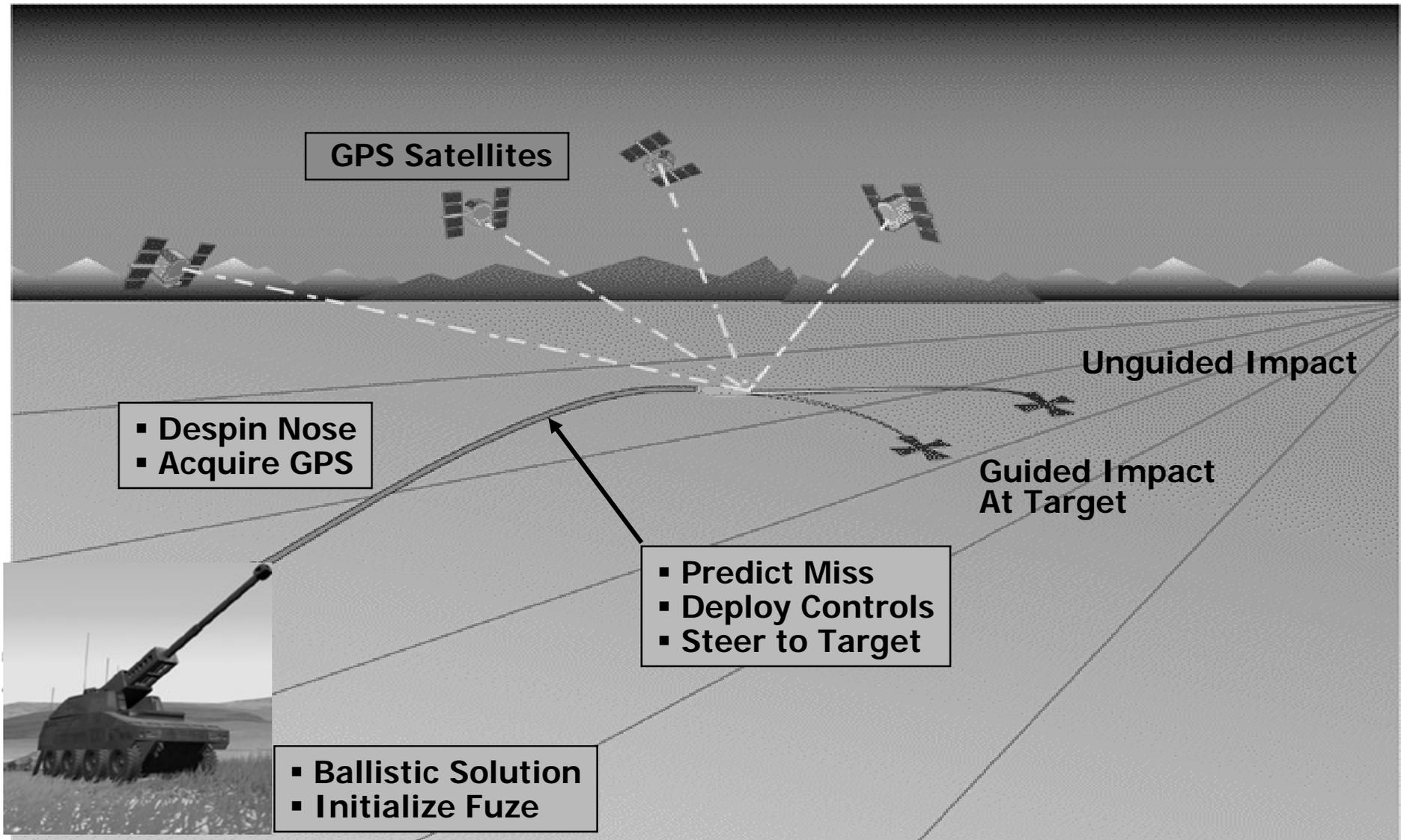


- GIF is a low-cost, fuze-sized module that is intended to replace a "NATO standard" fuze
- GIF corrects the ballistic trajectory in 2D, resulting in a small terminal miss distance
- GIF provides *"First Round - Steel on Target"*
- GIF technology can be applied to *literally millions of existing* 155mm, 105mm, 5", 76mm projectiles, and 120mm and 81mm mortars.





How does GIF Work?

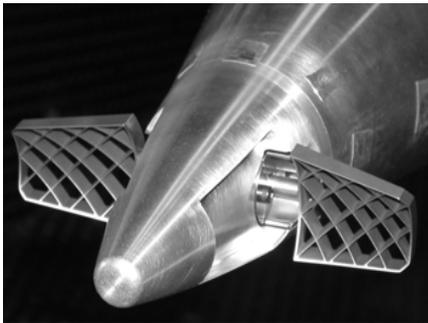




How does GIF Work?



"Waffle" Fins Provide High Lift without Stall
Required to Steer (Heavy) Army Ammo



COTS Batteries
(CR2) & Drive Motor
Replace
MOFA Battery

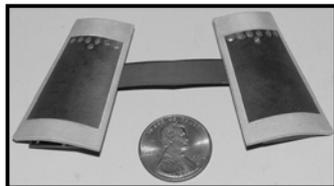
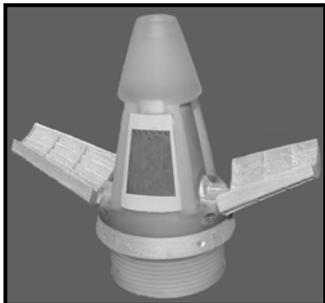


Standard Primer
and S&A
Untouched
by GIF Mods

Roll Brake
System

Differential Cant
Between the Waffles
Provides Anti-Roll
Torque After the
Covers are Discarded.

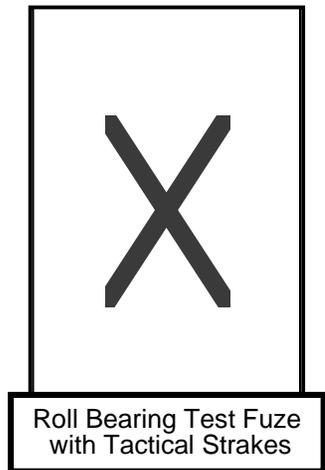
2 GPS
Antennae
(Top & Bottom)



Covers Protect Waffle Canards
Prior to the Initiation of Guidance

Setter Coils and
Standard MOFA Radar

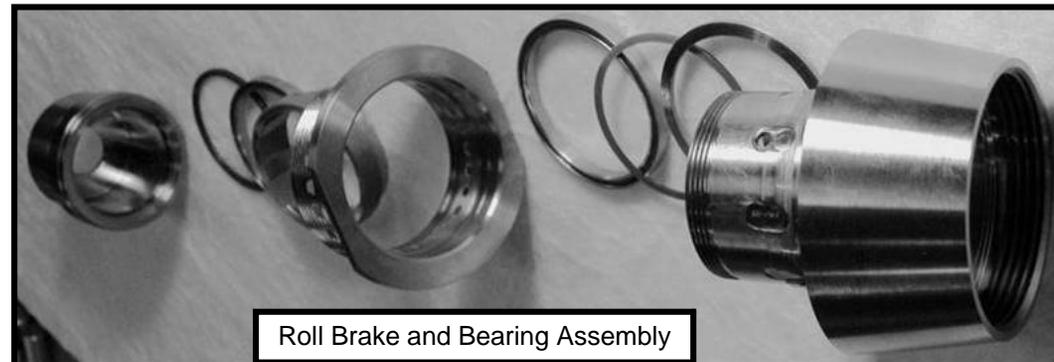
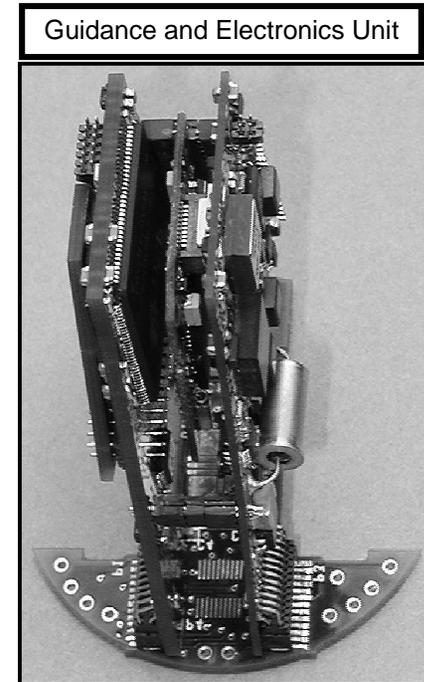
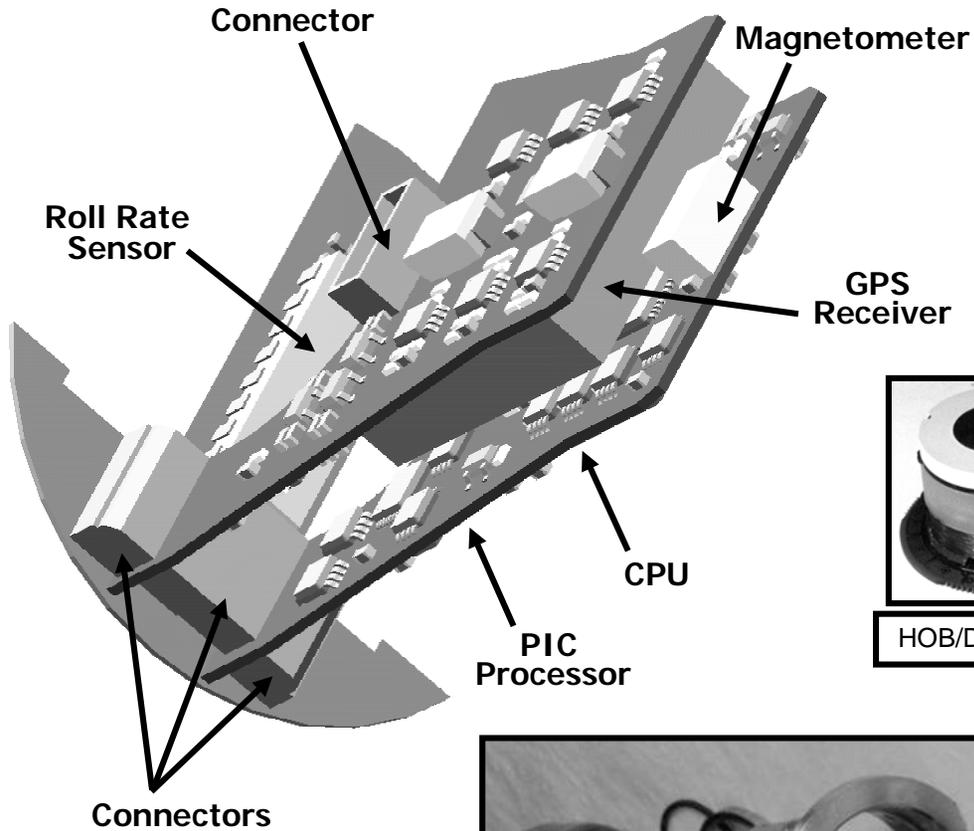
Pair of Anti-Roll Strakes
(One on each Cover)



Roll Bearing Test Fuze
with Tactical Strakes



How does GIF Work?





Program Plan



- Complete Technology Demonstration Phase w/ closed loop guided gun firing

- Award up to 2 Contracts (from NSWC) for development of GIF based on Gov't TDP
 - 100 Fuzes for qualification testing
 - Proposals may deviate from GIF baseline TDP to improve performance, reduce cost or schedule

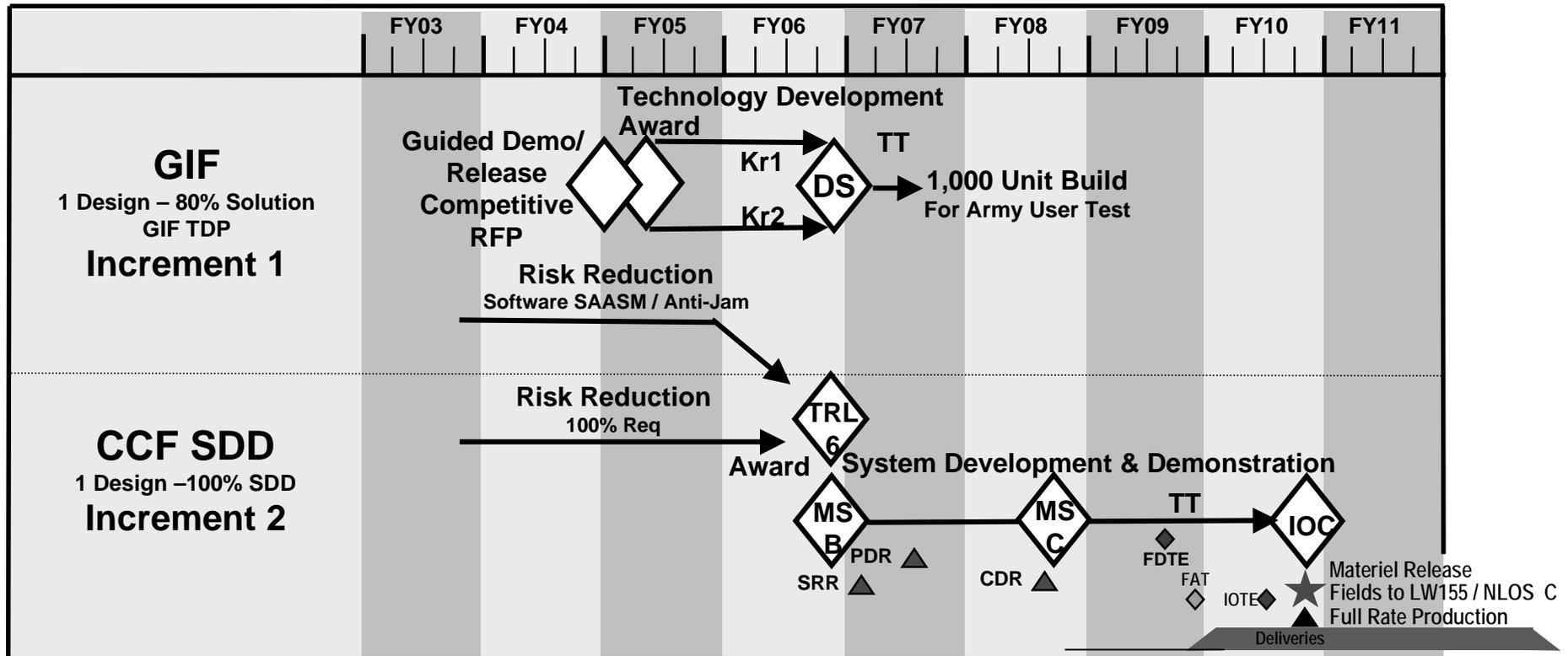
- Down select for following options
 - Build 1000 GIFs for Army user test
 - Course Correcting Fuze development (SDD)

- Army to take GIF design into CCF SDD program in FY06

- CCF Initial Operational Capability in FY10



Program Plan





Requirements



	Demo (FY04)	Increment 1 (FY07)	Increment 2 (IOC FY10)
Accuracy	50m	50m CEP	50m CEP
Ammo / Zone	M483 / 7R	M549 / 8S	All 155mm / 8S
Munition Type	Inert	HE	HE / DPICM
Fuzing Function	N/A	Prox, PD	Prox, PD, ET, Delay
Setter	Bench	EPIAFS	EPIAFS
GPS	C/A	C/A	P(Y) SAASM
Temperature	Ambient	0 to +120°F	-45 to +145°F
Shelf Life	N/A	7 Years	20 Years



GIF / CCF Team



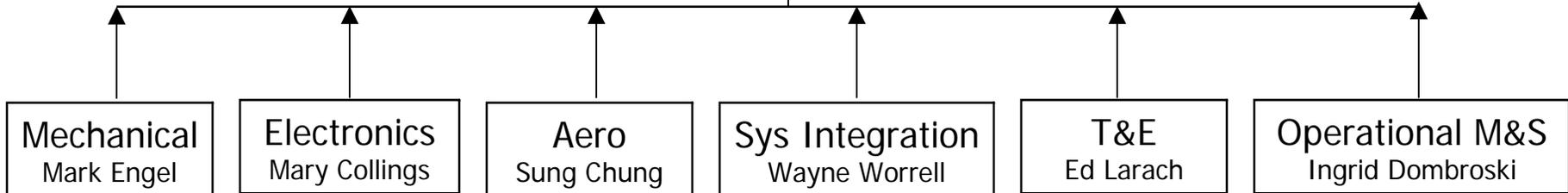
Program Management
OSD / OPM CAS / PEO IWS-3C

Programmatic Risk
• Cost
• Schedule
• Performance

Technical Management
Chad Finch - Rob Werko
Chief Engineer - John Fraysse

Risk Management Board

Technical Risk
• Cost
• Schedule
• Performance





Conclusion



- Closed loop guided demo shot currently scheduled for October of this year
- Gov't plans to hold pre-solicitation conference prior to RFP release
 - Review baseline design and SOW
 - Look for a FedBizOpps announcement this summer/fall