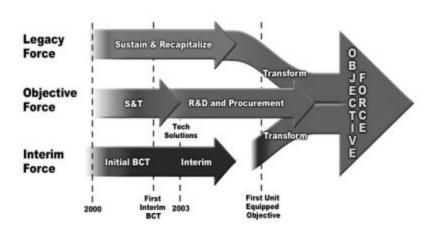






Armament for the Army in Transition The Interim Brigade Combat Team (IBCT)

Presented to:
NDIA Firepower
Conference



Briefer: Mr. Ty Cobb Advanced Systems Concepts Office

TACOM – ARDEC, Picatinny Arsenal, NJ

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Arm Of Exce	•	Objec	Gen 1 FCS	? Gen 3	en X	
Digitize (4I) Di	2-5-0-200	& 101st Air A	Aslt Div			
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For pictorial purposes only

Timeline not to scale

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Brigade Combat Team



Capability Enhancements



XM 982 155mm Artillery Cargo Round

XM 777 Light Weight 155mm Howitzer





SADARM

Brigade Combat Team



Capability Enhancements



PAYLOAD
54 each M80
w/ Self-Destruct
(6 decks of 9)

(cross sectional)

ROCKET MOTOR

FIN ASSEMBLY

COMPOSITE BODY

MULTIFUNCTIONAL
ELECTRONIC FUZE
(rocket initiation
and regulated asymptosic)

A self-Destruct
(6 decks of 9)

Total
Weight =
33 lbs

Mortar Fire Control System (MFCS)



DPICM 120mm ER Mortar Cartridge (XM984)

and payload expulsion)

PGMM



Brigade Combat Team



Capability Enhancements



Objective Crew Served Weapon (OCSW)



Objective Individual Combat Weapon (OICW)



Common Remotely Operated Weapons System (CROWS)

TACOM-ARDEC IBCT Capability Enhancements



West Point War-Fighters' Worksheet

Rank	Weapon/Item	Comments
	Weapon/Item Adv Optical Mortar Sights	
	AP Obstacle Breaching Sys	
	Auto Reg 1-D f/ 155mm Proj	
	Boom Gun	
	Canister Rd (AP), 90-105mm	
	CROWS	
	Demo Kit f/ Engineers	
	Enhanced Delivery Sys - Air	
	Excalibur Proj, 155mm	
	Explosive Standoff Mine Clearer	
	ER DPICM Mortar Rd, 120mm	
	HEP Rd, 90-105mm	
	JLW 155mm Howitzer, Towed	
	Mobile Counter Sniper Sys	
	Mortar Fire Control Sys	
	Non-Lethal Acoustic Sys	
	OCSW	
	OICW	
	PLS "SHOE"	
	PGMM, 120mm	
	PI-SADARM, 155mm	
	PI-WAM	
	QR-LAW	
	Roller Platform f/Air Deploy	
	SADARM Mortar Rd, 120mm	
	Urban Target Rd f/ TOW	
	Volcano Light	

West Point Warfighters' Experience Statistics

Rank / Branch	MAJ/AR	E-7/IN	E-8/IN	MAJ/IN	E-7/IN	CPT/EN	MAJ/FA	CPT/MP	CPT/SC	CPT/IN
Years in Branch	8	17	15	6	11	10	9	11	5	8
Desert Storm vet	Υ	N	N	N	N	Υ	Υ	Υ	N	N
Peace Keeping Vet / Mo	N	N	N	Y/9	Y / 10) N	N	Y / 11	Y/5	N



Grunt with Helmet Over Black Beret



Auto Reg 1-D f/155mm Proj	MERICA	Weapon / Item	Ту	MAJ Morin	Dave	Median	Top 3	Pair-Wise	
ER DPICM Mortar Rd, 120mm JLW 155mm Howitzer, Towed PGMM, 120mm PI-SADARM, 155mm B 11 6 12 13 12 PI-WAM SADARM Mortar Rd, 120mm Adv Optical Mortar Sights PObstacle Breaching Sys Tr 14 26 18 23 19 Boom Gun Canister Rd (AP), 90-105mm CROWS Demo Kit //Engineers Roller Platform t//Air Deploy PLS "SHOE" Enhanced Delivery Sys - Air Explosive Standoff Mine Clearer HEP Rd, 90-105mm Demo Kit //Engineers Roller Platform t/Air Deploy PLS "SHOE" Enhanced Delivery Sys - Air Explosive Standoff Mine Clearer HEP Rd, 90-105mm QR - LAW Obj Crew Served Weapon OgR-LAW Urban Target Rd // TOW 11 18 12 22 16 22 Volcano Linft Volcano Lin	Marine 8	Auto Reg 1-D f/155mm Proj	9	9	14	23	25	23	III.
JLW 155mm Howitzer, Towed PGMM, 120mm PI-SADARM, 155mm B B 11 B 12 B 14 B 15 B 12 B 13 B 12 B 14 B 15 B 12 B 13 B 12 B 14 B 15 B 16 B 17 B 18 B 18 B 17 B 18 B 18 B 18 B 18		Excaliber Proj, 155mm	14	7	13	14	11	14	PARTES.
PGMM, 120mm PI-SADARM, 155mm B B 11 C DI-SADARM, 155mm B B 11 C DI-SADARM, 155mm B B 11 C DI-WAM B SADARM Mortar Rd, 120mm B SADARM MORTAR Rd SADARM MORTAR Rd SADARM MORTAR Rd SADARM MORTAR Rd SADARM		ER DPICM Mortar Rd, 120mm	19	8	4	9	10	9	
PI-SADARM, 155mm PI-WAM PI-WAM 24 10 9 17 18 18 SADARM Mortar Rd, 120mm 23 23 24 21 15 17 Adv Optical Mortar Sights 27 27 27 27 11 20 11 AP Obstacle Breaching Sys 17 14 26 18 23 19 Boom Gun 16 24 25 24 26 24 Canister Rd (AP), 90-105mm 12 13 T T CROWS 1 Solven Kit //Engineers 26 26 22 13 Roller Platform t/Air Deploy 22 25 20 16 4 16 PLS "SHOE" 10 20 21 27 Enhanced Delivery Sys - Air Explosive Standoff Mine Clearer 15 15 16 Mortar Fire Control System 7 16 16 16 16 16 16 17 17 26 19 26 10 27 28 28 29 24 21 Mobile Counter Fire System 7 16 16 16 16 17 20 21 21 Mortar Fire Control System 6 4 3 17 17 26 19 26 19 26 Obj Crew Served Weapon 3 17 17 27 28 7 28 Volcanol Light 18 19 10 8 9 8 Volcanol Light 18 19 10 8 9 8 Volcanol Light 18 19 10 8 9 8 Volcanol Light 18 19 20 21 22 25 26 26 29 20 21 21 22 25 26 26 29 24 21 21 21 22 23 24 21 26 26 27 27 27 27 27 27 27 27	FOR THE	JLW 155mm Howitzer, Towed	4	<u>6</u>	2	4	17	4	
PI-WAM SADARM Mortar Rd, 120mm 23 23 24 21 15 17 Adv Optical Mortar Sights 27 27 27 27 11 20 11 AP Obstacle Breaching Sys 17 14 26 18 23 19 Boom Gun 16 24 25 24 26 24 26 24 Canister Rd (AP), 90-105mm 12 13 7 15 6 15 CROWS 1 Demo Kit f/Engineers 26 26 22 13 22 13 Roller Platform f/Air Deploy 22 25 20 16 4 16 PLS "SHOE" 10 20 21 27 Enhanced Delivery Sys - Air 18 12 19 6 6 5 6 Explosive Standoff Mine Clearer 15 15 18 10 21 10 HEP Rd, 90-105mm 2 22 8 20 24 21 Mobile Counter Fire System 7 16 16 16 6 3 6 Mortar Fire Control System 6 4 3 1 7 17 26 19 26 19 26 10 27 28 7 27 28 7 28 7 4 4 7 4 7 8 7 4 7 4 7 8 7 4 7 4 7 8 7 4 7 4		PGMM, 120mm	(5)	2	15	19	14	20	
PI-WAM SADARM Mortar Rd, 120mm 23 23 24 21 15 17 Adv Optical Mortar Sights 27 27 27 27 11 20 11 AP Obstacle Breaching Sys 17 14 26 18 23 19 Boom Gun 16 24 25 24 26 24 26 24 Canister Rd (AP), 90-105mm 12 13 7 15 6 15 CROWS 1 Demo Kit f/Engineers 26 26 22 13 22 13 Roller Platform f/Air Deploy 22 25 20 16 4 16 PLS "SHOE" 10 20 21 27 Enhanced Delivery Sys - Air 18 12 19 6 6 5 6 Explosive Standoff Mine Clearer 15 15 18 10 21 10 HEP Rd, 90-105mm 2 22 8 20 24 21 Mobile Counter Fire System 7 16 16 16 6 3 6 Mortar Fire Control System 6 4 3 1 7 17 26 19 26 19 26 10 27 28 7 27 28 7 28 7 4 4 7 4 7 8 7 4 7 4 7 8 7 4 7 4 7 8 7 4 7 4		PI-SADARM, 155mm	8	11	(5)	12	13	12	
Adv Optical Mortar Sights AP Obstacle Breaching Sys 17 14 26 18 23 19 Boom Gun 16 24 25 24 26 24 Canister Rd (AP), 90-105mm 12 13 7 15 6 15 CROWS 1 6 6 3 2 3 3 Demo Kit f/Engineers 26 26 22 13 22 13 Roller Platform f/Air Deploy 22 25 20 16 4 16 PLS "SHOE" 10 20 21 27 12 27 Enhanced Delivery Sys - Air Explosive Standoff Mine Clearer 15 15 18 10 21 10 HEP Rd, 90-105mm 2 22 8 20 24 21 Mobile Counter Fire System 7 16 16 6 6 3 6 3 6 5 Mortar Fire Control System 8 4 3 1 7 2 Non-Lethel Acoustic System 13 17 17 26 19 26 Obj Crew Served Weapon Obj Individual Combat Weapon QR-LAW 21 19 10 8 9 8 Urban Target Rd f/ TOW 11 18 12 22 16 22 Volcano Light Volcano Light Volcano Light 25 21 23 25 27 25		PI-WAM	24	10	_	17	18	18	
AP Obstacle Breaching Sys Boom Gun 16 24 25 24 26 24 Canister Rd (AP), 90-105mm 12 13 7 15 6 15 CROWS 1 5 6 22 13 22 13 Demo Kit f/Engineers 26 26 26 22 13 22 13 Roller Platform f/Air Deploy 22 25 20 16 4 16 PLS "SHOE" 10 20 21 27 12 27 Enhanced Delivery Sys - Air Enhanced Delivery Sys - Air Explosive Standoff Mine Clearer 15 15 18 10 21 10 HEP Rd, 90-105mm 2 22 8 20 24 21 Mobile Counter Fire System 7 16 16 5 3 5 Mortar Fire Control System 6 4 3 1 7 2 Non-Lethel Acoustic System Obj Crew Served Weapon Obj Individual Combat Weapon QR-LAW Urban Target Rd f/ TOW 11 18 12 22 16 22 Volcano Light Volcano Light Volcano Light Volcano Light 25 21 23 25 27 25		SADARM Mortar Rd, 120mm	23	23	24	21	15	17	
Boom Gun 16 24 25 24 26 24 Canister Rd (AP), 90-105mm 12 13 7 15 6 15 CROWS Demo Kit f/Engineers 26 26 22 13 22 13 Roller Platform f/Air Deploy 22 25 20 16 4 16 PLS "SHOE" 10 20 21 27 12 27 Enhanced Delivery Sys - Air 18 12 19 6 5 6 Explosive Standoff Mine Clearer 15 15 18 10 21 10 HEP Rd, 90-105mm 2 22 8 20 24 21 Mobile Counter Fire System 7 16 16 5 3 5 Mortar Fire Control System 6 4 3 1 7 2 Non-Lethel Acoustic System Obj Crew Served Weapon Obj Individual Combat Weapon QR-LAW 21 19 10 8 9 8 Urban Target Rd f/ TOW 11 18 12 22 16 22 Volcano Light		Adv Optical Mortar Sights	27	27	27	11	20	11	
Canister Rd (AP), 90-105mm CROWS Demo Kit f/Engineers 26 26 22 13 22 13 Roller Platform f/Air Deploy 22 25 20 16 4 16 PLS "SHOE" 10 20 21 27 12 27 Enhanced Delivery Sys - Air Explosive Standoff Mine Clearer 15 15 18 10 21 10 HEP Rd, 90-105mm 2 22 8 20 24 21 Mobile Counter Fire System 7 16 16 5 3 5 Mortar Fire Control System Non-Lethel Acoustic System Obj Crew Served Weapon Obj Individual Combat Weapon QR-LAW Urban Target Rd f/ TOW 11 18 12 22 16 22 Volcano Light 25 21 23 25 27 25		AP Obstacle Breaching Sys	17	14	26	18	23	19	
CROWS 1 5 6 3 2 3 Demo Kit f/Engineers 26 26 22 13 22 13 Roller Platform f/Air Deploy 22 25 20 16 4 16 PLS "SHOE" 10 20 21 27 12 27 Enhanced Delivery Sys - Air 18 12 19 6 5 6 Explosive Standoff Mine Clearer 15 15 18 10 21 10 HEP Rd, 90-105mm 2 22 8 20 24 21 Mortar Fire System 7 16 16 5 3 5 Mortar Fire Control System 6 4 3 1 7 2 Non-Lethel Acoustic System 13 17 17 26 19 26 Obj Crew Served Weapon 3 1 1 2 1 1 Obj Individual Combat Weapon 20 3 11 7 8 7 QR-LAW 21 19 10 <t< td=""><td></td><td>Boom Gun</td><td>16</td><td>24</td><td>25</td><td>24</td><td>26</td><td>24</td><td></td></t<>		Boom Gun	16	24	25	24	26	24	
Demo Kit f/Engineers 26 26 22 13 22 13 Roller Platform f/Air Deploy 22 25 20 16 4 16 PLS "SHOE" 10 20 21 27 12 27 Enhanced Delivery Sys - Air 18 12 19 6 5 6 Explosive Standoff Mine Clearer 15 15 18 10 21 10 HEP Rd, 90-105mm 2 22 8 20 24 21 Mobile Counter Fire System 7 16 16 6 3 5 Mortar Fire Control System 6 4 3 1 7 2 Non-Lethel Acoustic System 13 17 17 26 19 26 Obj Crew Served Weapon 3 1 1 2 1 1 1 Obj Individual Combat Weapon 20 3 11 7 8 7 QR-LAW 21 19 10 8 9 8 Urban Target Rd f/ TOW 11		Canister Rd (AP), 90-105mm	12	13	7	15	6	15	
Demo Kit f/Engineers 26 26 22 13 22 13 Roller Platform f/Air Deploy 22 25 20 16 4 16 PLS "SHOE" 10 20 21 27 12 27 Enhanced Delivery Sys - Air 18 12 19 6 5 6 Explosive Standoff Mine Clearer 15 15 18 10 21 10 HEP Rd, 90-105mm 2 22 8 20 24 21 Mobile Counter Fire System 7 16 16 6 3 5 Mortar Fire Control System 6 4 3 1 7 2 Non-Lethel Acoustic System 13 17 17 26 19 26 Obj Crew Served Weapon 3 1 1 2 1 1 1 Obj Individual Combat Weapon 20 3 11 7 8 7 QR-LAW 21 19 10 8 9 8 Urban Target Rd f/ TOW 11		CROWS	1	5	6	3	2	3	
PLS "SHOE" Enhanced Delivery Sys - Air Enhanced Delivery Sys - Air Explosive Standoff Mine Clearer 15		Demo Kit f/Engineers	26			· · · · · · · · · · · · · · · · · · ·	22	13	
Enhanced Delivery Sys - Air Explosive Standoff Mine Clearer 15 15 15 18 10 21 10 HEP Rd, 90-105mm 22 22 8 20 24 21 Mobile Counter Fire System 7 16 16 6 3 5 Mortar Fire Control System Non-Lethel Acoustic System 13 17 17 26 19 26 19 26 Obj Crew Served Weapon Obj Individual Combat Weapon QR-LAW 21 19 10 8 9 8 Urban Target Rd f/ TOW 11 18 12 22 16 22 Volcano Light		Roller Platform f/Air Deploy	22	25	20	16	4	16	
Explosive Standoff Mine Clearer HEP Rd, 90-105mm 2 22 8 20 24 21 Mobile Counter Fire System Mortar Fire Control System Non-Lethel Acoustic System Obj Crew Served Weapon Obj Individual Combat Weapon QR-LAW Urban Target Rd f/ TOW 15 15 18 10 21 10 21 10 21 10 22 8 20 24 21 3 5 3 5 4 3 7 2 11 7 26 19 26 1 1 1 7 8 7 8 7 9 8 7 9 8 9 8 9 8 9 8		PLS "SHOE"	10	20	21	27	12	27	
HEP Rd, 90-105mm 2		Enhanced Delivery Sys - Air	18	12	19	6	5	6	
Mobile Counter Fire System 7 16 16 3 5 Mortar Fire Control System 6 4 3 1 7 2 Non-Lethel Acoustic System 13 17 17 26 19 26 Obj Crew Served Weapon 3 1 1 2 1 1 Obj Individual Combat Weapon 20 3 11 7 8 7 QR-LAW 21 19 10 8 9 8 Urban Target Rd f/ TOW 11 18 12 22 16 22 Volcano Light 25 21 23 25 27 25		Explosive Standoff Mine Clearer	_15_	15	18	10	21	10	
Mortar Fire Control System Non-Lethel Acoustic System Obj Crew Served Weapon Obj Individual Combat Weapon QR-LAW Urban Target Rd f/ TOW Mortar Fire Control System 6 4 3 1 7 2 19 26 19 26 1 1 7 8 7 28 1 1 7 8 7 8 7 9 8 9 8 9 8 Urban Target Rd f/ TOW 11 18 12 22 16 22 Volcano Light 25 21 23 25 27 25		HEP Rd, 90-105mm	2	22	8	20	24	21	
Non-Lethel Acoustic System 13 17 17 26 19 26 Obj Crew Served Weapon 3 1 1 2 1 1 Obj Individual Combat Weapon 20 3 11 7 8 7 QR-LAW 21 19 10 8 9 8 Urban Target Rd f/ TOW 11 18 12 22 16 22 Volcano Light 25 21 23 25 27 25		Mobile Counter Fire System	7	16	16	5	3	5	
Obj Crew Served Weapon 3 1 2 1 1 Obj Individual Combat Weapon 20 3 11 7 8 7 QR-LAW 21 19 10 8 9 8 Urban Target Rd f/ TOW 11 18 12 22 16 22 Volcano Light 25 21 23 25 27 25		Mortar Fire Control System	6	4	3	1	7	2	
Obj Individual Combat Weapon 20 3 11 7 8 7 QR-LAW 21 19 10 8 9 8 Urban Target Rd f/ TOW 11 18 12 22 16 22 Volcano Light 25 21 23 25 27 25		Non-Lethel Acoustic System	13	17	17	26	19	26	
QR-LAW 21 19 10 8 9 8 Urban Target Rd f/ TOW 11 18 12 22 16 22 Volcano Light 25 21 23 25 27 25		Obj Crew Served Weapon	3	1	1	2	1	1	
Urban Target Rd f/ TOW 11 18 12 22 16 22 Volcano Light 25 21 23 25 27 25		Obj Individual Combat Weapon	20	3	11	7	8	7	
Volcano Light 25 21 23 25 27 25		QR-LAW	21	19	10	8	9	8	
Volcano Light 25 21 23 25 27 25 9/10		Urban Target Rd f/ TOW	11	18	12	22	16	22	
		Volcano Light	25	21	23	25	27	25 Ω/	10

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TACOM-ARDEC IBCT Capability Enhancements



Rank	Weapon/Item	Comments
11	Adv Optical Mortar Sights	Common mortar sight is part of IBCT Brigade Sets
19	AP Obstacle Breaching Sys	Army add on to USMC prod; Mat Rel in 2QFY02
23	Auto Reg 1-D f/155mm Proj	
24	Boom Gun	
15	Canister Rd (AP), 90-105mm	Initial approval granted
3	Com Remote Op Wpn Sys	A system being integrated into IBCT IAVs
13	Demo Kit f/Engineers	
6	Enhanced Delivery Sys Air	High on DA DCSLOG Cbt Svc Spt Enablers List
14	Excaliber Proj, 155mm	Funded Sys Dev & Demo (PM-ARMS)
10	Expl Standoff Mine Clearer	
9	ER DPICM Mort Rd, 120mm	Funded Concept & Tech Dev (ARDEC)
21	HEP Rd, 90-105mm	PM-TMAS evaluating; perhaps a future program
4	Jt LW 155mm How, Towed	Funded Sys Dev & Demo (PM-JLW); will replace IBCT M198s
5	Mobile Counter Fire Sys	



TACOM-ARDEC IBCT Capability Enhancements



(continued)

Rank	Weapon/Item	Comments
2	Mortar Fire Control Sys	Funded Sys Dev & Demo (PM-MORT)
26	Non-Lethal Acoustic Sys	
1	Obj C-S Weapon, 25mm	Funded Concept & Tech Dev (JSSAP)
7	Obj Indiv Cbt Wpn	Funded Pgm Def & Rsk Reduce (PM-SA)
27	Palletized Load Sys "SHOE"	"Slipper" accepted; Production shortly (PM-HTV)
20	Prec Guided Mort Mun, 120mm	FY01 Congress \$6M +up to Cncpt/Tech Dev (ARDEC)
12	PI-SADARM, 155mm	
18	PI-WAM (Adv Hornet)	Funded Sys Dev & Demo (PM-MCD)
8	QR-LAW (MP whd f/AT4)	Funded PI program; to Production in FY04
16	Roller Platform f/Air Deploy	To be fielded within a year
17	SADARM Mortar Rd, 120mm	
22	Urban Target Rd f/TOW	Approved AMCOM program awaiting \$s
25	Volcano Light	Most likely will be fielded to IBCTs





IBCT Armaments Summary

• Is the IBCT Going to be Lethal?

Damn Straight!

- Can IBCT Lethality be Enhanced in Short/Long Terms?

 Damn Straight!
- Can TEAM Picatinny Provide that Enhanced Lethality?

 Damn Straight!
- But, ... Not So Fast...

Think: Warfighters' Needs; Affordability; Logistics Impact; and "Not-So-Lethal" Stuff