



MARINE CORPS SYSTEMS COMMAND

EQUIPPING THE WARFIGHTER TO WIN

STEM EVENTS AT QUANTICO

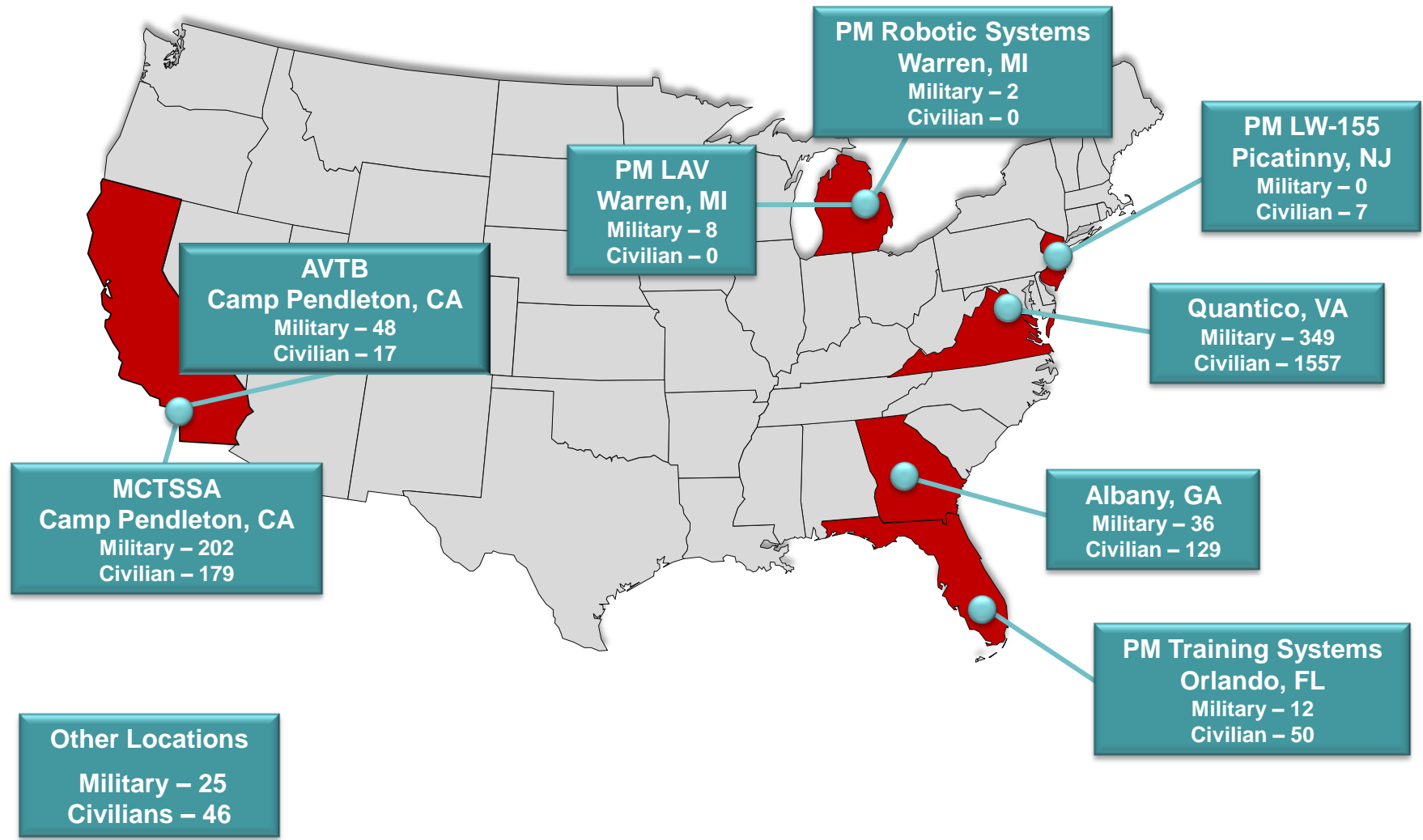
Mike Ferraro and Mark Jones
Engineering Competency Managers
Marine Corps Systems Command



MARINE CORPS SYSTEMS COMMAND

EQUIPPING THE WARFIGHTER TO WIN

Workforce Locations



Commandant of the Marine Corps

Assistant Secretary of the Navy
Research, Development & Acquisition

MARCORSYSCOM

PEO
EIS

PEO
Land Systems

Staff

JPO MRAP
Mine Resistant
Ambush Protected

Staff

Staff

Deputy Commander
Resource Management

Deputy Commander
SIAT

Commanding Officer
MCTSSA
Camp Pendleton, CA

Assistant Commander
Contracts

Assistant Commander
Acquisition Logistics/
Product Support

Assistant Commander
Programs

PM Marine INTEL
Marine Intelligence

PM AMMO
Ammunition

PM LAV
Light Armored Vehicle
Warren, MI

PM TRASYS
Training Systems
Orlando, FL

PM ISI
Information Systems and
Infrastructure

PM MC3
MAGTF Command, Control,
and Communications

PM IWS
Infantry Weapons Systems

PM AFSS
Armor and Fire
Support Systems

PM CSS
Combat Support Systems

PM NEN
Naval Enterprise
Networks

PM EIS
Enterprise IT Services

PM GCSS-MC
Global Combat Support
System-Marine Corps

Assistant Secretary of the Army
Research, Development & Acquisition

PEO
Ground Systems

JPEO
Chem/Bio Defense

PM RS
Robotic Systems
Warren, MI

PM
Protection

PM AAA
Advanced Amphibious
Assault

Amphibious Assault
Vehicle

Amphibious Combat
Vehicle

Marine Personnel
Carrier

PM CAC2S
Common Aviation Command
& Control System

PM GATOR
Ground/Air Task Oriented
Radar

PM JLTV
Joint Light Tactical
Vehicle

PM LW155
Lightweight 155
Picatinny, NJ

PM LVSR
Logistics Vehicle System
Replacement

PM MTRV
Medium Tactical Vehicle
Replacement

Information from the Service Systems Engineering Self Assessment for the Weapon Systems Acquisition Reform Act of 2009

- FY11 Personnel by Service Coded SE/PSE

- Army: 10071
- USAF: 8516
- Navy: 19327



- FY12 Personnel by Service Coded SE/PSE

- MCSC: 300



2011 MCSC STEM Robotics Camp

- Based on SeaPearch Underwater Robotics
 - 42 students in 12 teams
 - 11 engineering mentors
 - 12 teachers
- Assistance from NSWC Dahlgren
 - Training coordinators
 - Material and presenters
- Assistance from College of W&M
 - Comprehensive training and materials
 - Professional development & lesson plans
 - Educational climate/ethics to S&T personnel and teachers
 - Assessment/evaluation



Unclassified



2011 MCSC STEM Robotics Camp Training Schedule

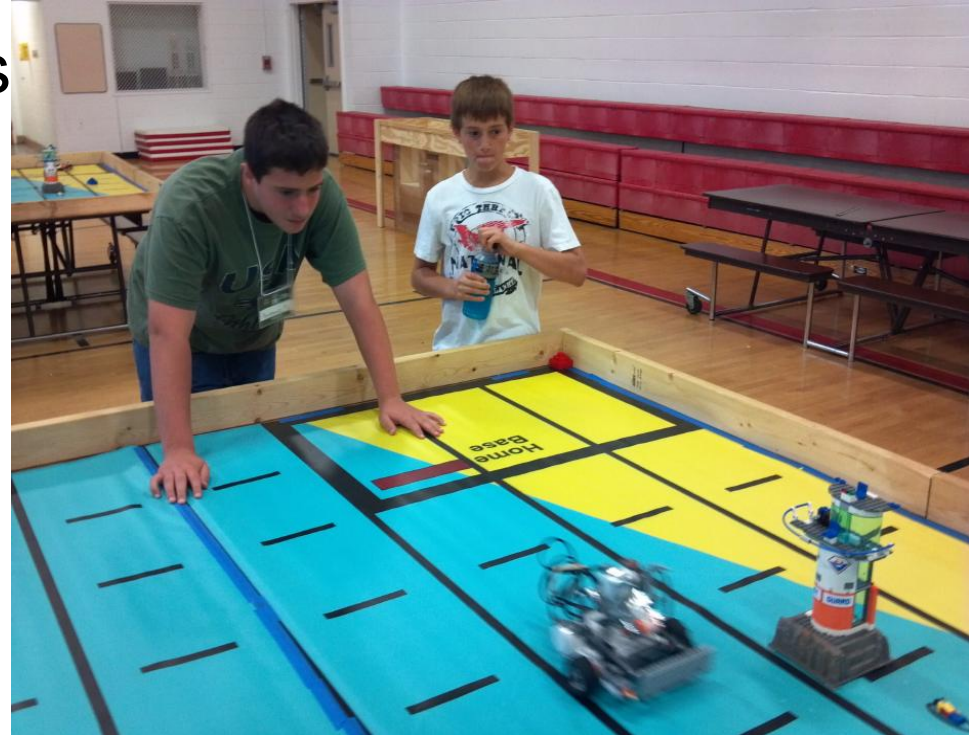
Time	Wednesday	Trainer	Thursday	Trainer	Friday (A)	Trainer	Friday (B)	Trainer
8:30	Opening	Joe	Opening	Joe	Opening	Joe	Opening	Joe
8:45			Tower Design		Tower Test/Analysis		Sea Foil Test	
9:00	Team Building	John						
9:15			Tower Build					
9:30	Seaperch	Sara			Sea Foil Test		Tower Test/Analysis	
9:45	Build	(Joe, John)						
10:00	Unit 1							
10:15			SeaFoil Design		Seaperch Challenges		Life Science	
10:30	Seaperch	Sara						
10:45	Build	(Joe, John)	SeaFoil Build					
11:00	Unit 2							
11:15								
11:30	Lunch		Lunch		Lunch		Lunch	
11:45								
12:00								
12:15								
12:30	Art of Inquiry	Jake	Climate and Ethics	Jake	Electric Motor	Joe	Electric Motor	Joe
12:45								
13:00								
13:15								
13:30	Seaperch	Sara	Seaperch Build		Life Science		Seaperch	
13:45	Build	(Joe, John)	Build				Challenges	
14:00	Unit 3		Unit 4					
14:15								
14:30								
14:45								
15:00					Debrief Q/A	Joe, et. al.	Debrief Q/A	Joe, et. al.
15:15					Session		Session	
15:30								

Unclassified



2012 MCSC STEM Robotics Camp

- Based on Lego Robotics
 - 43 students in 12 teams
 - 12 engineering mentors
 - 12 teachers
 - 3 High School Mentors



- Assistance from NSWC Dahlgren
 - Same as 2011
- Assistance from College of W&M
 - Same as 2011



2012 MCSC STEM Robotics Camp Team Schedule

Teams A - E

Time	Monday	Tuesday	Wednesday	Thursday	Friday
8:30	Opening	Opening	Opening	Opening	Opening
8:45	Team Building	Team Planning	Team Planning	Team Planning	Team Planning
9:00	Opening Speaker	Rocket Data	LEGO Robotics	STEM Careers	Tower Test and Analysis
9:15					
9:30	Team Planning			Tower Build	
9:45		LEGO Robotics			
10:00	Spaghetti Tower		Tower Design		LEGO Robotics
10:15					
10:30				LEGO Robotics	
10:45					Lunch
11:00	Lunch	Lunch	Lunch	Lunch	
11:15					MRAP Demo
11:30	FBI Demo	Warfighting Lab GATOR/ATV Demo	Rocket Test	iRobot Demo	
11:45					
12:00			LEGO Robotics		LEGO Robotics
12:15					
12:30		LEGO Robotics			
12:45					
13:00	LEGO Robotics		Augmented Reality Demo	LEGO Robotics	
13:15					
13:30	Snack	Snack	Snack	Snack	Snack / Discussion
13:45					
14:00	Rocket Build	Rocket Analysis		LEGO Robotics	Clean - Up/ Check Out
14:15			LEGO Robotics		
14:30	LEGO Robotics				Closing/Awards
14:45					
15:00	Closing	Closing	Closing	Closing	Closing



Bottle Rocket Setup



FBI Demo Prep

Unclassified



Future Plans

- Secure funding from the Office of Naval Research
- Continue with Quantico School Robotics Camps
- Expand effort to Camp Pendleton
- Expand effort to surrounding school districts



Questions?

michael.ferraro@usmc.mil

mark.jones1@usmc.mil

