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*National Defense Industrial Association
Systems Engineering Conference
Mr Alfred Rice
30 Oct 13*

11/1/2013

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Improvements to Drivers Training

- **Background**

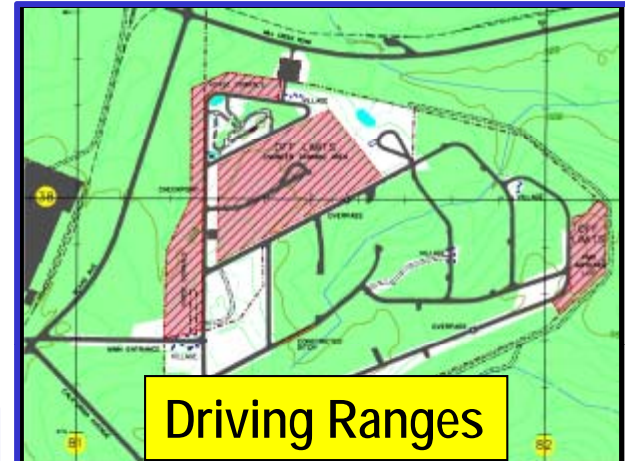
- Army Maneuver Center of Excellence briefed the DOTF on the need for improvements to driver training for deployed forces
- DOTF Chair tasked us to put together a Working Group to affect change
- Training Gap Analysis:

Service members of all MOSs in all Branches are required to operate tactical wheeled vehicles in combat areas and among civilian populations. The environments are open rural areas and tightly packed urban areas. The all-weather missions are on all types of terrain, in all light and visibility conditions.

These tactical vehicles are often larger, heavier, with higher centers of gravity, less visibility and more blind spots for the crew. These tactical vehicles have a greater potential for accidents due to vehicle complexity, operational missions, and their harsh operating environment.

All of these factors require a higher level of skill to operate an tactical wheeled vehicle proficiently and safely.


Mitigation Effort: Training Approach Enablers



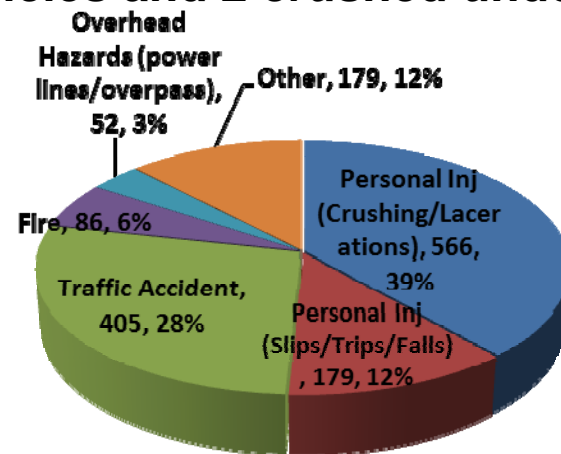
Holistic Approach to Improve Driver's Training

We will also explore options for improving our ability to train squads both at home station and at the combat training centers. - GEN Martin Dempsey, Chief of Staff Army

MRAP Mishap Distribution from 1 Nov 07 – 20 Oct 13

- 2382 recorded mishap events from **multiple sources***
- 915 events (38%) involve some type of rollover/tip-over
 - 486 - Fall initiated: occurred due to uneven terrain or ground surface collapse
 - 202 - Maneuver initiated: swerving maneuver on flat ground or terrain
 - 40 - Impact Initiated: hitting object caused rollover
 - 187 - Unknown
- **Twenty one** rollover events have resulted in **32** US fatalities; 14 drowning, 18 blunt force trauma to crewmembers, the most recent occurred 25 Apr 2012. To date there have been **872** reported rollover injuries.
- Fifty six others, (2 US citizens and 54 other nationalities), have received fatal injuries from 41 MRAP mishap events
- Five other events resulted in **5** US fatalities; 1 gunner hit by an overpass and 2 crewmember pinned between two vehicles and 2 crushed under
- 1467 Other events (62%) include: 

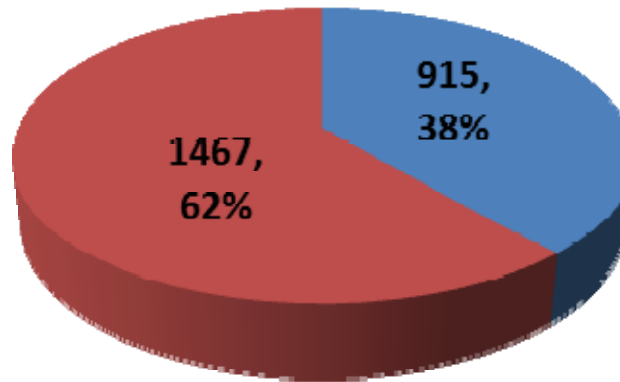
- Personal Inj (Crushing/Lacerations)
- Personal Inj (Slips/Trips/Falls)
- Traffic Accident
- Fire
- Overhead Hazards (power lines/overpass)
- Other



* CENTCOM SIGACTS, Unit Safety Gram/Red-Hash, Safety Centers. Data includes CONUS, OIF/OND and OEF.

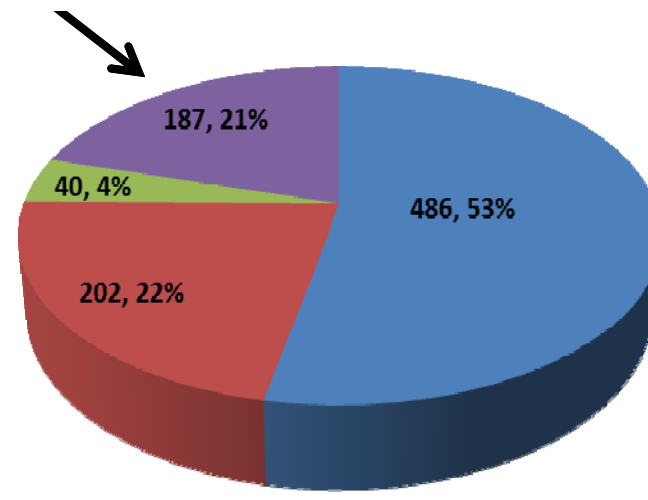
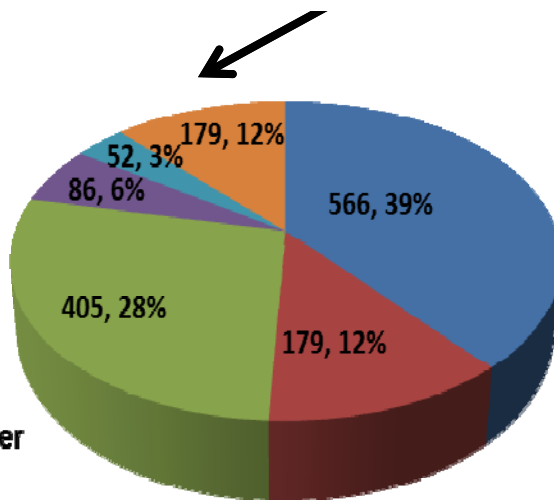
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MRAP All Mishaps Distribution by Type, 1 Nov 07 – 20 Oct 13



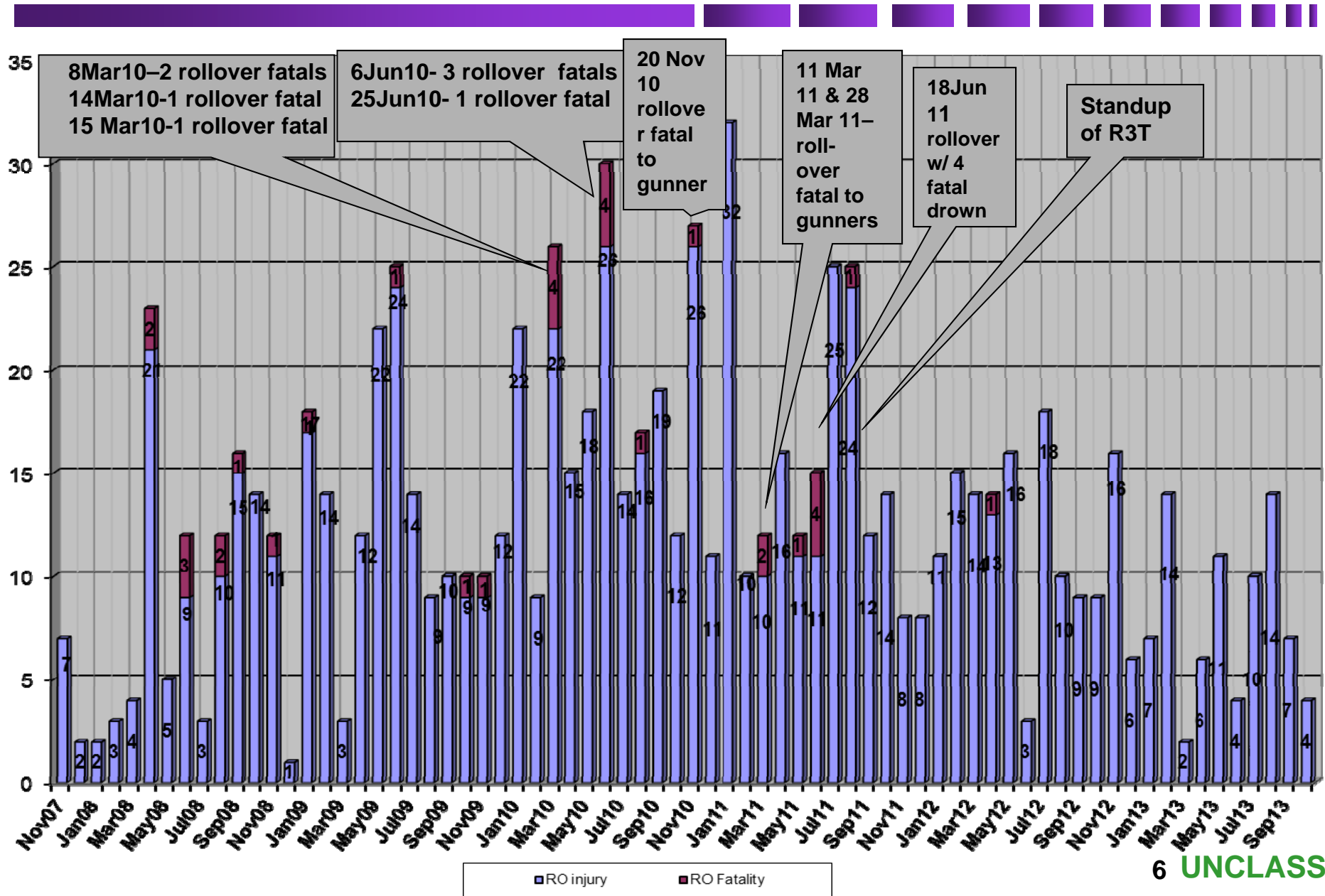
Other accidents Rollovers

- Personal Inj (Crushing/Lacerations)
- Personal Inj (Slips/Trips/Falls)
- Traffic Accident
- Fire
- Overhead Hazards (power lines/overpass)
- Other



RO Fall RO Maneuver RO Impact RO Unknown

MRAP Rollover Fatalities and Injuries, 1 Nov 07 – 20 Oct 13



Improvements to Drivers Training - Accomplishments

- **Organization**
 - Tasked the existing Joint Tactical Vehicle Safety Working Group to take on this challenge
 - Collaborated with the USFOR-A Rollover Risk Reduction Team (stood up July 2011)
- **Collaboration**
 - First face-to-face meeting at Ft Bliss, TX, Nov 2011
 - Visited the MRAP Driver's Training Course at Ft Bliss, TX.
 - Coordinated w/ FORSCOM to ensure deploying units in pipeline have MRAPs for home station training
 - Visited the Asymmetric Warfare Group MRAP Driver's Training Course at Ft Lee, VA
 - Visited Camp Dawson, WVA and the MRAP Driver's Training

Improvements to Drivers Training - Accomplishments



- **Analyses**
 - **Analyses of the data and scope of the problem**
 - **Review existing policy on driver training***
 - **Deployed Forward Operational Assessment Team into theater.**
 - **Driver Survey and Analysis; on-line and small group (in theater and CONUS). Analysis by DSOC and USAPHC***
 - **Refinement of MRAP Mishap Data – Excel w/ pull down menu***
 - **Cause Condition Outcome Recommendation (CCORS) tool developed by Joint Trauma Analysis and Prevention of Injuries in Combat, Operational Survival Analysis Section, Ft Rucker, AL***
 - **Research into analysis tools: Generalized Environment for Modeling Systems (GEMS), Web Enabled Temporal Analysis System (WebTAS)***

Improvements to Drivers Training - Accomplishments



- **Safety Awareness**
 - Collaborated with AMSAA for publication of “Rollover Hotspots” map*
 - Collaborated with JTCOIC/TBOC on production of Shallow Water Fording video*
 - New GTA 07-09-002, MRAP FoV Operational Safety Card*
 - Master list of Training Enablers sites: MRAP vehicle, driving ranges, MET, CDT/ODS*
 - JLLIS MRAP folder binder link
- **Policy, Doctrine, and Publications**
 - Collaborated, drafted and published the CENTCOM GENADMIN MSF – Pre-Deployment Training Requirements (published 031550Z Apr 2012)*
 - Coordinated with Asymmetric Warfare Group on publication of “Adaptable Off-Road Vehicle Track Construction” handbook, 1 Mar 2012*

Improvements to Drivers Training - Accomplishments

- **Policy, Doctrine, and Publications (cont)**
 - Publication of monthly USFOR-A “OEF Tactical Vehicle Rollover Mishap Trend” and “MRAP Rollover Mishap Trend” report*
 - Collaborated with publication of “Warfighter Handbook for Vehicle Survivability”, Mar 2012*
 - Collaborated with CALL Ft Leavenworth on MRAP-MATV Handbook , Observations, Insights and Lessons No. 11-11*
 - A second CENTCOM GENADMIN MSF – Pre-Deployment Training Requirements (published Aug 2013) to publicize the location of the sites that have the Tactical Driver Training Program of Instruction files*
- **Training**
 - Improvement of Virtual Battle space Simulator (VBS2) to better replicate the tabletop simulator vehicle characteristics. Software was upgraded to include vehicle weight, CG, turning radius, etc.

Improvements to Drivers Training - Accomplishments



- **Training (cont)**
 - **Master Driver Training Course for 88M at Army Transportation School (Standardized)**
 - **Publication of Tactical Driver Training Program of Instruction. 10 Modules with 30 files. Downloadable at four websites. The biggest accomplishment***
 - **Ground Guide Procedures video developed by MCOE and WVA NG at Camp Dawson, WV***
 - **Improved CDT Simulators to capture geo-specific graphics for training in rugged terrain**
- **Test and Evaluation**
 - **Researched, conducted analysis and user jury proof of concept on Electronic Stability Control for MRAPs***

Improvements to Drivers Training - Accomplishments



- **Outreach:**
 - **Brief to Defense Safety Oversight Council, 15 May 2013***
 - **Brief USFOR-A DCG Operations***
- **Future plans:**
 - **TRICT demonstration – Huntsville, AL, R3T committee visit projected for March 2014**
 - **Ground Collapse video**
 - **Part II Driver Survey – check on policy compliance for driver selection, training and licensure**
 - **Information Transfer- Lessons Learned**
 - **Assessment of Home Station Training**

Questions

