JLOD - What's New in JLOD V10.0

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Distribution statement A: Approved for public release: Distribution is unlimited



Conflict Simulation Laboratory https://csl.llnl.gov



LLNL-PRES-830680

This work was performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under contract DE-AC52-07NA27344. Lawrence Livermore National Security, LLC







- Operating Systems for V8.8 (default)
 - RHEL 8.7/8.9 are also supported



Enhancements & Improvements



- Sim / Workstation performances
- GUI easier access to menus
- Text/CSV file supports on GUIs
- JSJ7 Modernization Prep-work

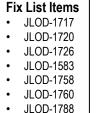
- OBS 4.3 Importing / Exporting
- JLVC Modular FOM supports
- NETN ORG/ETR supports



Simulation Fixes and Improvements



- Fixed PEChar data sync issues
- Fixed TBM Flight times in the TEL Fire Plan Editor
- Fixed Emission Scheduler Restore
- Fixed Flyout Report not including impacting munitions as dead in report
- Saved/Restore Entity CBRN state
- Fixed Cruise Missile simulation hang on vertical dive
- Fixed restoring movement orders to Population Entities

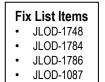




Workstation Fixes and Improvements



- Fixed crash using Weapon Pane and using the Right-Button selection
- Fixed creation of ZERO sized Population Entities
- Fixed crash using Emission Scheduler and the "Cancel Plan" button
- Fixed crash using ACS engagement symbol after the combat has terminated





Enhanced VISTA to import more OBS Class Data

- Updated MCL data importer
 - ▶ Imports DIA Equipment code, TAMCN, LIN, PWLIN, and 2525C Symbol
 - Can optionally updated each type of data





Fix List ItemsJLOD-1768

JLVC Modular FOM Improvements



- Two Year effort to migrate to Modular FOMs and upgrade to RPR3 base
 Challenge since NATO's NETN FOM still uses RPR2 as its base
- RPR3 Base Conversion
 - Use WeightOnWheels instead of PowerPlantOn to denote "Flying" aircraft
 Upgrade to use all SISO encoding/decoding standards
- Added Non-Human HLA Object Class usage
 Supports JLVC, NETN and base RPR2/3 FOMed federations.

Fix List Items
 JLOD-1704
 JLOD-1727



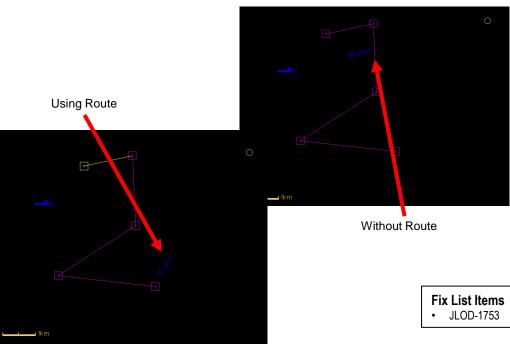
Magic Shoot Improvement – Can use routes



Magic Shoot (In control) _ 🗖 🗙						
ooter Selections						
Shooter Name D 656 NORMANDIE	Shooter OBS U0000G00YAD	<u> </u>				
Designator Name	Designator OBS					
· · · · · · · · · · · · · · · · · · ·						
lission Name						
unition Selections						
Bullet to Shoot	Database Values					
AT 7 SAXHORN ATGM	Selected Munition	BGM 109 TLAM 3D1 ZW075				
AT 8 SONGSTER ATGM	Munition Type	High Explosive				
AT 9 SPIRAL ATGM	LockOn Type	GPSandInertialGuided				
• АТВІР ГОАВ	GuidanceLockType	No Lock On				
🔴 BARAK	Propulsion Type	Powered				
BARAK 8	Min Range (m)	1000				
BGM 109 TLAM 3D1 ZW075	Max Range (m)					
		BGM 109 TLAM 3D1 WO75				
· ·		2,9,225,1,19,2,1				
Number Of Rounds 1	Warhead Type	1000				
ruet Selections						
rget Selections						
Target Name T	Target OBS	8				
Target Location 34:19:10.097N 34:52:44.696E D	Description					
light Path: \Zig Zag To Target	Selec	ct Path Clear Path Selection				
ear All Shoot at Entity SHOOT at Location						

Cruise Missile shots can now support routes
 Optionally support use of routes
 Missiles will use route and then fly to target

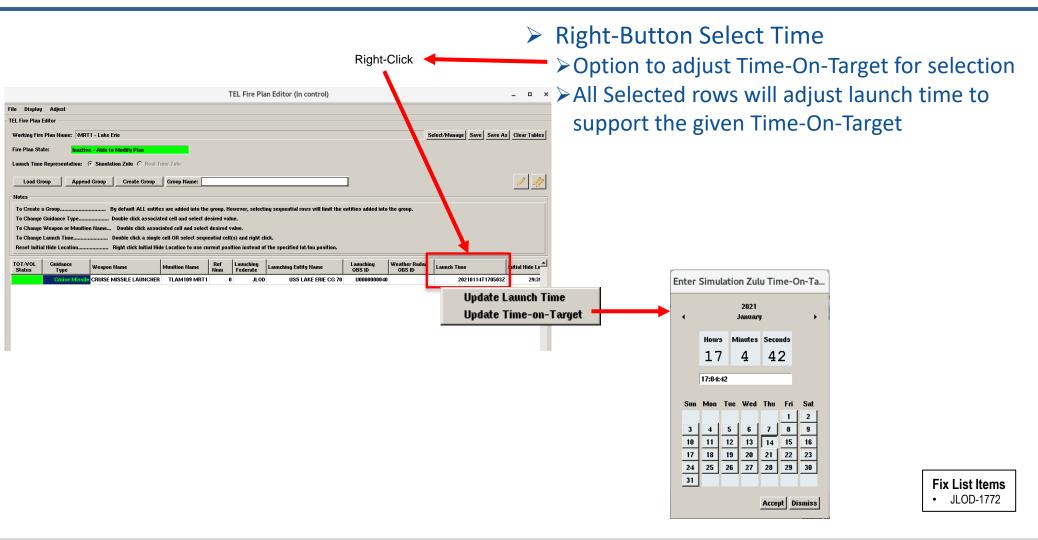
> TBM and Harpy currently ignore route





TEL Fire Plan Improvement – TimeOnTarget

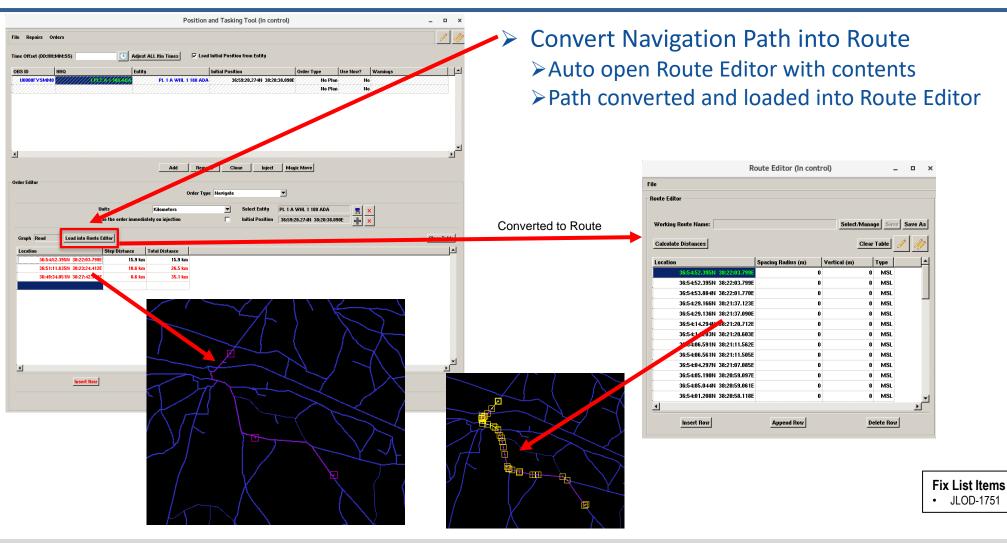






Position & Tasking Tool Improvement







Lawrence Livermore National Laboratory LLNL-PRES-830680

Route Editor Import Improvement



Route Editor (In control)	 Import CSV or Text files Reads exported CSV file from window Supports list of locations (one location per line) Optionally consumes route location details Spacing Radius Vertical Offset (height) Offset type (AGL or MSL)
Open Load JCATS-XML Route Save As Load JLOD-CSV Route	 Export CSV (Text File) Simple text file that contains all table fields Can be imported or edited
Open Save JCATS-XML Route Save JLOD-CSV Route	

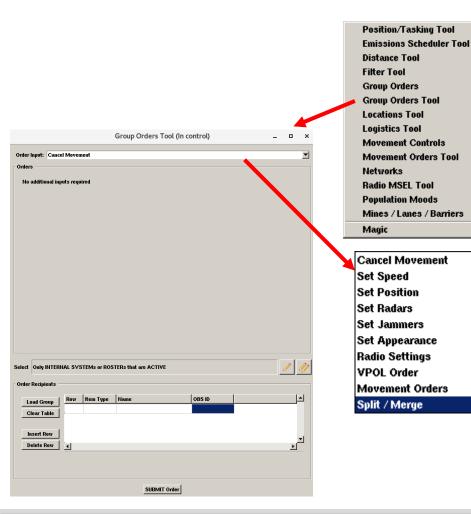
Fix List Items

JLOD-1711



Group Order GUI Changes





- Removed Duplicate selection items
 Removed Cancel and Set Speed selections
 Features exist in Movement Controls GUI
 Removed Set Position, exist in Magic Position
- Moved Controls for easy access
 Split/Merge controls access from menu
 Guise/Appearance controls access from menu
 Radar Controls access from menu
 Jammer Control access from menu
 Radio Control access from menu
 - Fix List Items

 JLOD-1742
 JLOD-1740
 JLOD-1741
 JLOD-1743
 JLOD-1744
 JLOD-1745
 JLOD-1747



Position/Orient Group Order Improvement



Moved Controls for easy access Same functionality, removed combo selection

Orders >	Mount/Dismount Split/Merge Position/Orient Guise/Appearance				Magic Position/Orien	: (In control)		-	•	×
ment Controls ment Orders Tool orks • MSEL Tool ation Moods	Radars Jammers	✓ Enable Position	n Update:	Magic	Aove Location 14.690N 34:39:24.836E	Radius (m) 11911.6	Ø			
≱ / Lanes / Barriers : ▶	Position Health Health (Implicit)			⊽ Set		Altitude Type: Altitude 0	Surface 💌 Meters 💌	3		
	Shoot Device Status	🔽 Enable Orientat	tion Upda	ates Compas	s Orientation (deg) 35	Angle Jitter (de	g) 5			
	Repair Status Logistics Percent CBRN Adiust									
		Select ANY SYSTI	EMs or A	OSTERs or PO	PULATIONs that are ACTIVE				0	<i>?</i> ?
	Logistics Percent	Order Recipients —	EMs or R	OSTERs or PO	PULATIONs that are ACTIVE	OBS ID				<i>i</i>
	Logistics Percent	Order Recipients -		ttem Type	Name				<u>/</u>	<i>?</i> ?
	Logistics Percent	Order Recipients —	Row	Item Type) Entity	Name LPD 979 TAI SHA	N U0000G085KC			<u></u>	//
	Logistics Percent	Order Recipients – Load Group Clear Table	Row	tem Type D Entity Entity	Name LPD 979 TAI SHA	N U0000G085KC			<u> </u>	<i>⋛</i> ∕
	Logistics Percent	Order Recipients – Load Group Clear Table Insert Row	Row	Item Type D Entity I Entity 2 Entity	Name LPD 979 TAI SHA PC 1240 SHANGHAI	N U0000G085KC				
	Logistics Percent	Order Recipients – Load Group Clear Table	Row	Item Type D Entity I Entity 2 Entity	Name LPD 979 TAI SHA PC 1240 SHANGHAI	N U0000G085KC			<u> </u>	

Fix List Items JLOD-1741



Tool Menu

Position/Tasking Tool **Emissions Scheduler Tool** Distance Tool **Filter Tool** Grou Grou Locat Logis Move Move Netw Radio Popu Mine Magi

Improved Magic Position GUI



Tool Menu

	Position/Tasking Tool								
	Emissions Scheduler Tool								
	Distance Tool								
	Filter Tool					N	Tak		
	Group Orders >						> lat	ole can be	S
	Group Orders Tool								
	Locations Tool						> Fi	nables snaj	n.
	Logistics Tool								
	Movement Controls Movement Orders Tool								
	Networks								
	Radio MSEL Tool								
	Population Moods						> Tał	ole can be	r
	Mines / Lanes / Barriers						TUK		1
_	Magic +	Position						nables rend	~
_	magic P	Health						nables repo):
			1						
		Health (Imp						ile can be e	:C
		Shoot							
		Repair State							
		Logistics Po							
		CBRN Adju	st						
				Position fro	om CSV (In con	trol)			
Ord	lers								
	ble Positions							🗖 Load Select	ed E
Row	HHQ Name		Entity Name		Entity OBSID	Position		Notes	
(D	CIVILIANS		CESSNA172_2832	U000000685	54:35:24.832N	17:20:03.232E		
1	1	CIVILIANS		CESSNA172_2819	U0000000671	54:33:26.800N	17:18:29.017E		
:	2	CIVILIANS		 CESSNA172_2814		54:32:55.992N	17:16:43.734E		
	3	CIVILIANS		CESSNA172_2826	U000000679	54:31:35.704N	17:13:19.642E		
	4								
	•								
_									
4									

Append Row

- > Each Entity can have Unique Position
- Table can be saved as CSV text file
 Enables snap-shot of entities position

ntity's Position

Delete Row

Table can be restored from CSV text file
 Enables repositioning from OBS Scenario update
 File can be edited with EXCEL or text editor

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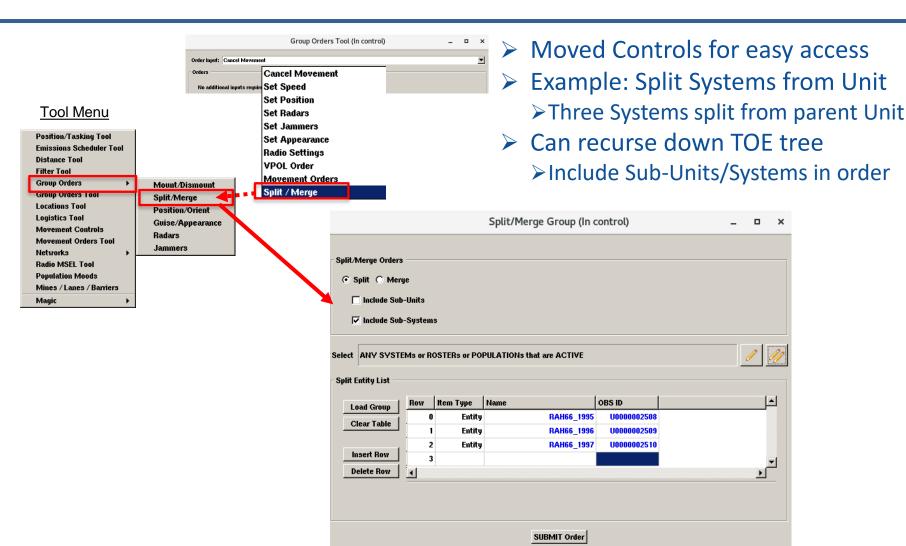
Fix List Items
• JLOD-1774



Insert Row

Split/Merge Group Order Improvement



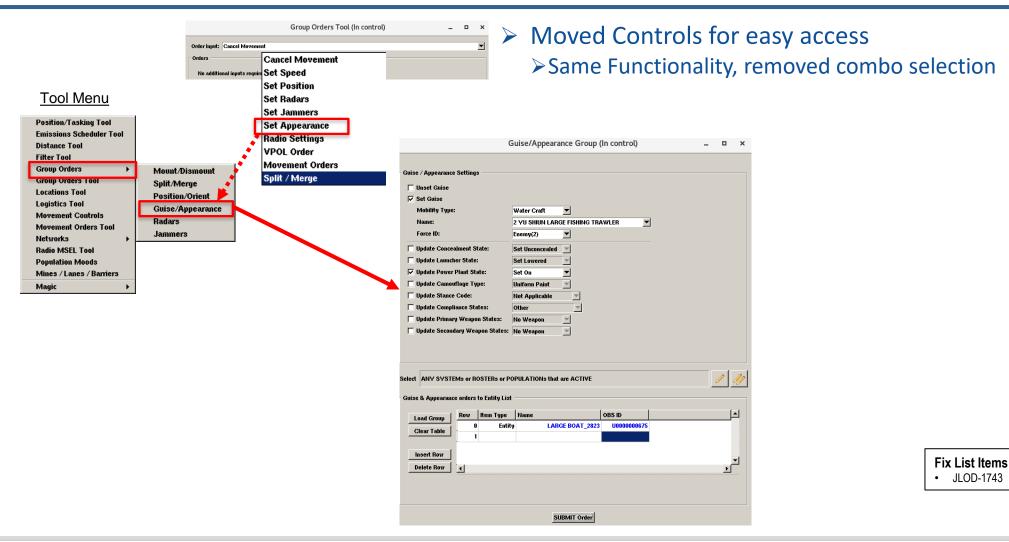


Fix List ItemsJLOD-1740



Guise/Appearance Group Order Improvement

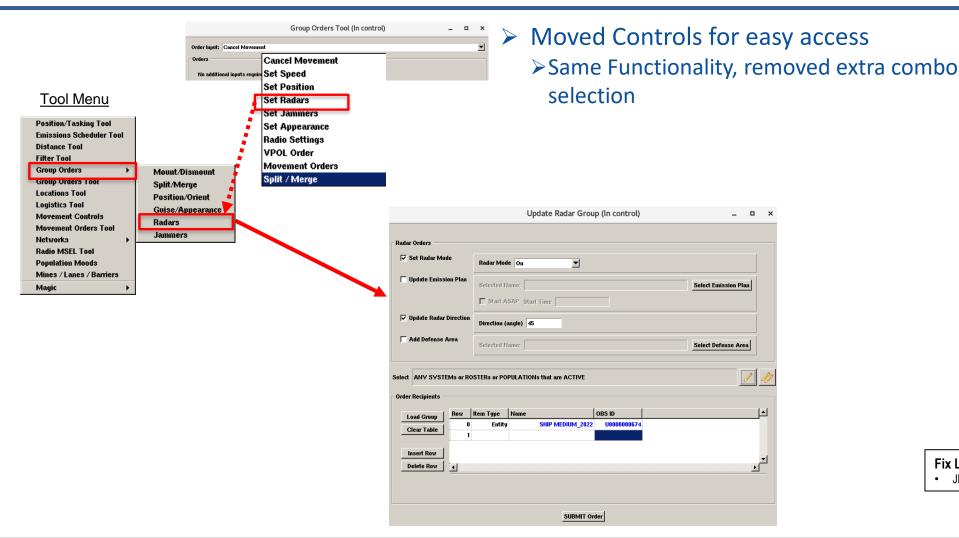






Radar Group Order Improvement







Fix List Items

JLOD-1744

Jammer Group Order Improvement



Group Orders Tool (In control) Order Input: Cancel Movement Orders Cancel Movement No additional inputs require Set Speed Set Radars Set Appearance Braissions Scheduler Tool Set Appearance Fitter Tool Fitter Tool	_ D X	 Moved Controls for Same functionality, selection 	-	
Group Orders Mount/Dismount Group Orders 1001 Split/Merge Locations Tool Position/Orient	lammar Andara	Update Jammer Group (In control)	_ 0 X	
Guise/Appearance Movement Controls Movement Orders Tool Networks Radio MSEL Tool Population Moods Mines / Lanes / Barriers	- Jammer Orders ↓ Set Jammer Mode ↓ Update Emission Plan	Jammer Mode On Selected Name: Start ASAP. Start Time	Select Emission Plan	
Magic >	Update Jammer Direction	Direction (angle) 135 Selected Name:	Select Defense Area	
	All JAMMER orders to Entity Li	IFERs or POPULATIONs that are ACTIVE	<i>ال کی</i> ام ۲	Fix List Items • JLOD-1745
		SUBMIT Order		



Radio Group Order Improvement



Group O Order hput: Cancel Movement Orders De additional inputs requir Position/Tasking Tool Emissions Scheduler Tool Distance Tool Fitter Tool Group Orders Tool Locations Tool Locations Tool		selection wrders	
	dio State dio MSEL Tool	Update Radio Group (In control) Radio Orders Radio State Off Select ANY SYSTEMs or ROSTERs or POPULATIONs that are ACTIVE RADIO orders to Entity List Load Group 0 Entity LPD 979 TAI SHAN U00000085KC 1	
		Delete Row Image: SUBMIT Order	Fix List Items JLOD-1747



Added CBRN Group Order Window



1001 Meriu	Tool	Menu	
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Tool Menu Position/Tasking Tool Emissions Scheduler Tool Distance Tool Filter Tool Group Orders Tool Locations Tool Logistics Tool Movement Controls Movement Orders Tool Networks Radio MSEL Tool							djust CBRN s on Entitie	
Population Moods					Update CBRN Grou	in (In control)	_ 0	×
Mines / Lanes / Barriers	Position	-						
<u>Magic</u> →	Health Health (Implicit) Shoot Repair Status Logistics Percent CBRN Adjust		CBRN Selection Orders - Agent Class Ch CBRN Agent Type Mt Select ANY SYSTEMs on CBRN orders to Entity Lis Load Group Row Clear Table	ISTARD rROSTERs or PO at	PULATIONs that are ACTIVE	OBS ID U0000G885KK	Ø 	
			Insert Row Delete Row	2	SUBMIT OF	rder	Ŀ	±



Fix List Items

JLOD-1757

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Damage Play Improvements



Added ability to partially play Enhanced Casualties
 Munition effects can cause enhanced casualties
 Simulation Control to dynamically enable/display casualty play
 Simulation supports "Time to Die" for Lifeforms

Added Damages/Casualty Controller panes to display damages
 Removed "Damage Info" pane, replaced with new panes
 Lifeforms will now have "Casualty" pane to display health and any casualties
 Non-Lifeforms will now have "Damages" pane to display health and any damages

Simulation supported REPAIRs are not complete
 Currently only supports manual magic fix/repair
 Planned completion in a future patch

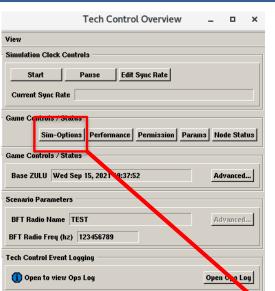
Fix List Items • JLOD-1698 • JLOD-1695 • JLOD-1692

JI OD-1766

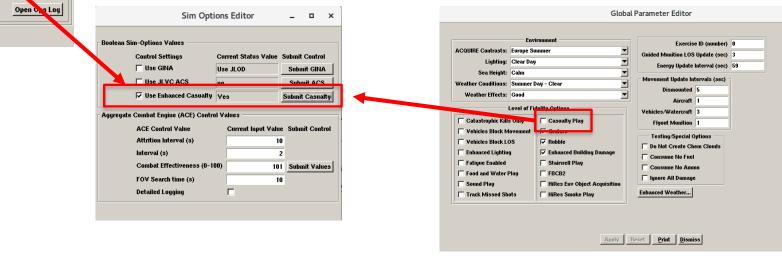
NOTE: Simulation support REPAIRs are not complete, only manual actions supported



Damage Play – Tech Control Sim Options



- > New ability to change Simulation Options
- Dynamic Control of Enhanced Damage Play
 Turn on/off JLOD Enhanced Casualty Play
 GUIs will always show federated Casualty Play
- Load Initial State from Param File





Fix List Items

JLOD-1695

Vista Global Parameters



Damage Play – Damages Pane



		F	RIFLE A 3 1 A 1 109) INF		_ 0 ×	Ν	
TOE Display	Refresh Reports Sta	tus Alerts			Auto-Refresh	≑⇒€		Replaced
Name: RIFLE A 3					LVC ID: U0000G01JYQ			≻Damage
	Entity Status	🎤 Not Repairing	> Frozen	Dismounted	Not Crew			0
	Not Towing	No Combat	iii Ammo: 100%	Mot Captured	P No Guise			
Entitu Info Move	ement TEL Plan Annear	ande Damage Info ca	sualtu [Intel State] Logis	stics Repair/Medical Ta	sking Planning			Added E
Invincible State:			and y into i otato 2091		ang (r rannig (
Damage State: Firepower:	Firepower Kill DISABLED							≻New "C
Mobility:	ok	k						≻New "D
Burning: Smoking:	No No							► New D
	Magic Kill							
	Magic Firepower Ki Magic Mobility Kill							
	Magic FireMob Kill							
	Magic Resurrect							
		_						
					RIFL	E A 3 1 A 1 109 IN	F	
			TOE Display	Refresh Reports Stat	us Alerts			Auto-Refresh
			Name: RIFLE A 3	· · · · · · · · · · · · · · · · · · ·				LVC ID: U0000G01JVQ
				Entit, Status				LACID: 00000001346
				<u>+ F-Кі</u>		> Frozen	🛱 Dismoun	
			\bullet \bullet	AB Not Towng		Ammo: 100%	IIII Not Capt	
			Entity Info Mov		nce Damage Int <mark>o Casualt</mark>	y tel State Logistics	Repair/Med	ical Tasking Planning
				e Status ate : can take damage	FirePower : DIS	SABLED	Burning	: No
			Damage Stat	e : Firepower Kill	Mobility : ok		Smoking	j: No
			Commands /	Controls				
			Magic	Kill Magic Firepowe	r Kill Magic Mobility Kill	Magic FireMob Kill	Magic Re	surrect
			- Penairable Cas					

- Replaced "Damage Info" Pane
 Damages Pane for non-lifeform wounds
- Added Enhanced Casualty Info
 New "Casualty" Tab for Lifeforms
 New "Damages" Tab for Non-Lifeforms

F

Fix List ItemsJLOD-1692



Damage Play – New Casualty Pane



TOE Display Refresh Reports Status Auto-Refresh Image: Status Image: Status	 New Casualty Pane support Lifeforms Only Contains old Damage info and controls Adds optional Enhanced Casualty play
Entity Info Movement TEL Plan Appearance Damage Inf Casualty Itel State Logistics Repair/Medical Tasking Planning Entity Damage Status Invincible State : Canade FirePower : DISABLED Burning : No Damage State : FirePower Kill Mobility : jok Smoking : No Commands / Controls	 Enhanced Casualty Support Requires permission to add/remove effects Table contains current wound and status info Can inject wound at any time Use Filter codes to limit damage choices
Titter Codes F-Kil Select Damage DISLOCATED SHOULDER	Filter Codes Right-Click All> Magic Delete Maintance Magic Repair F-Kill Merkill MF-Kill Fix List Items • JLOD-1692



Damage Play – New Damages Pane



PL FUEL AND WATER A WHL 128 SPT ×	
TOE Display Refresh Reports Status Alerts 🖌 📥 🗾 💕	New Damages Pane supports Non-Lifeforms
Name: PL FUEL AND WATER A WHL 128 SPT LVC ID: 00000G01M6P	 Contains old Damage info and controls Adds optional Enhanced Casualty play
Entity Info Movement TEL Plan Appearance Damage In D Damages] ntel State Logistics Repair/Medical Mounting Tasking Planning Entity Damage Status Invincible State : can take damage FirePower : ok Burning : No Damage State : Mobility Kill Mobility : DISABLED Smoking : No Commands / Controls Magic Kill Magic Firepower Kill Magic Mobility Kill Magic FireMob Kill Magic Resurrect	 Enhanced Casualty Support Requires permission to add/remove effects Table contains current damage and status info
Right-Click in Table for Options Bight-Click in Table for Options Description Effect Repair Required Repair Time Must Start By Repair Status Mechanic OBSID LMTV ENGINE M-Kill D.S. 06:00:00 N/A Untreated None	 Can inject damages at any time Use Filter codes to limit damage choices
	Filter Codes Right-Click Magic Delete Maintance Magic Repair F-Kill Magic Repair
Image Image Filter Codes M-Kill Select Damage LMTV ENGINE Image Add Damage	Fix List Items • JLOD-1692



JLODMaster Fixes/Improvements



- Renamed EXIS Gateway into "Web Bridge"
- Added GCCS Gateway application to stim GCCS-J
- Removed GINA Gateway application, effort was completed



- JLOD-1778JLOD-1714



Renamed EXIS Bridge to Web Bridge



JLOD-10.0Dev JLOD Master Executive	 Renamed tool to support future JFTC directions Same functionality, new name
JEBB JEBB Web Server Planner Force Generator Symbol Editor Terrain Editor Vista	JLOD WebBridge I File Request SYNC TOE Tree Missions Facilities Billboard Owned/Observed Immediates Default Side Estonia ESTONIa ESTONIa EITHUANIa Intrubania NATO NORWAY POLAND REDS Sweden
	Find Find Next Refresh Tree Collapse Tree





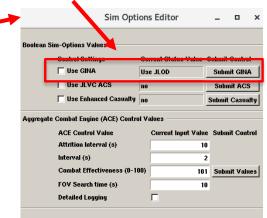
LLNL-PRES-830680

Removed GINA Gateway (Proof-of-Concept)



	JLOD-10.0Dev JLOD Master Executive	Ren
<u>F</u> ile Reset		≻To
Setup File: /roguesim/work/kelleher/datadev/scenario/20)211E4v2repair.setup	
Application GINA Gateway	P RTI FOM Configuration Pitch (RTI) JEBB Sim-Opti Setup File: //roguesim/work/kelleher/datadev/scenario/ ecovery film	≻Ex
GCCS Gateway GINA Gateway JEBB JEBB Web Server Planner Sim Host Force Generator	ration Name: jivc	Ren ≻Re
Symbol Editor Terrain Editor Vista 07 DIS Application 25 View	Tech Control Overview _	Ren ≻Re
Sta	n Clock Controls rt Pause Edit Sync Rate Sync Rate	
- Game Con	trols / Status Sim-Options Performance Permission Params Node Status trols / Status LU Sat Aug 6, 2022 18:45:34 Advanced	Boolean Sin
BFT Radi	Parameters io Name TEST Advanced o Freq (hz) 123456789	Aggregate (
-	rol Event Logging n to view Ops Log	

- Removed GINA Gateway Application
 Tool was a Proof of Concept
 Experiment has ended
- Removed for JLODMaster
 Removed option
- Removed Dynamic Simulation Control
 Removed option from Workstation controls



Fix List Items	
• JLOD-1778	



GCCS / Link-16 Bridge (Proof-of-Concept)



JLOD-10.0Dev JLOD Master Executive File Reset Help Setup File: /home/kelleher/data_90/scenario/CWI>2021_06011720.setup Application Startup RTI FOUL C Gurveon Pitch (RTI) JEBB Sim-Options Server JLOD Simulation JLOD Workstation Startup RTI FOUL C Gurveon Pitch (RTI) JEBB Sim-Options Server JLOD Simulation JLOD Workstation File: Sim Web Bridge Federation	 Proof of Concept GCCS C4I feed Simple GCCS-J JUNIT/JPOS messages
GCCS Gateway JEBB JEB Web Server Plauner Force Generator Symbol Editor Terrain Editor Vista Sim Alerts JLOD Simulations JLOD Simulations Image: allow JLOD Workstations / Bridges Image: allow	GCCS Bridge X File Game Time Sat Aug 21, 2021 13:56:58 Zulu Time I Request SYNC TOE Tree Missions Installations Billboard Connections AddC4I ReloadC4I ID Name Session State 1 Not Named Sending at 60/180/180 seconds rapscallion.lini.gov 7022 1 Not Encluded
	Fix List Items





ForceGen Fixes and Improvements



Main ForceGen Window
 Removed duplicate OBS V2/V3 importers, capability in OBS V4.x importer

- OBS Data Importer V4.x Window
 - Read CSV text file to inject Entities into a given scenario
 - Read JACOB produced CSV text files to inject Units/Entities into a given scenario
 - Fixed generation of UUIDs to ensure they are unique
 - Use CSV text file to import (update) OBS Entity Composition Class Data
 - Moved "Use Fchar to create OBS Classes" to "OBS Fix/Repair" menu

OBS Data Displayer V4.					-		
File	Export Export Classe	es Remap Classes	View OBS Classes	Validate Classes	OBS Fix/Repair Positions		
	Read FPIan Read Local XML	OBS Errors			Fix OBS Classes Fix OBS Scenario Instances		
F	Read Remote XML				Mark Unit/Entity Classes as Reference		
F	Read ODIN Formats				Check Reference VS Entities		
F	Read CSV Entity	1			Check Reference VS Units		
F	Read JACOB files				Find missing Entity-Class References		
۱	Write Error Log				Find missing Unit-Class References		
•	Clear dataset				Overwrite UUIDs for all Entities		
•	Quit				Fill Missing UUIDs for all Entities		
					Import Value into Entity-Class		
					Use FChar to create OBS Classes		

Fix List Items
 JLOD-1722
 JI OD-1763

- JLOD-1765
 JLOD-1765
- JI OD-1767
- JLOD-1767
 JLOD-1780



ForceGen – Update OBS Entity Class Data via CSV



V File Info Box						
	can contain ad-hoc columns.					
	splayed with the header Impor	t value-X, where X				
	in position in the CSV file.					
	•					
'he user has two	basic forms of control, a LOO	KUP key, and a SET v	alue.			
he LOOKUP key	will attempt to find the given	Entity Class, while the	e			
ET key will dete	mine what field in the Entity (Class to update.				
he LOOKUP inp	ts are the TYPE of key, and t	hen the columnn that	contains the key.			
he SET inputs a	re the TYPE of data to be repl	aced, and then the col	lumn that			
ontains the new	replacement value.					
udate Entitu Cor	position Class List					
	·					
ookup Value Ty	MCLID	Lookup Value O 1	mnport Value	e-0 💌		
nport Value Typ	e DIA Code 💌	Select Value Colum	m Import Value-	1 💌 ,	_	
		-			lunation-2	Import Value-3
	y Class	Match Import Value	Import Value-0	Import Value-1		Import Value-3
low Match Enti	U Class M1117 ASV AMBULANCE	Match Import Value		Import Value-1 Code_1	WHL, ASV,M1117, TEST SPACE,MULTI SPAC	ES,, M1117 ASV AMBU
Row Match Enti	y Class	Match Import Value	Import Value-0 N02333	Import Value-1 Code_1 Code_2	WHL , ASV,M1117, SEST SPACE,MULTI SPACE TRKD,M60,ML	ES,, M1117 ASV AMBU C70 AVLB M61
Row Match Enti	NY Class M1117 ASV AMBULANCE AVLB M60 TRKD	Match Import Value	Import Value-0 N02333 N02249	Import Value-1 Code_1 Code_2 Code_3	WHL, ASV,M1117, TEST SPACE,MULTI SPACE TRKD,M60,ML TRKD,M1131 MILY,M1	ES,, M1117 ASV AMBU C70 AVLB M6 D66 AEV M113 TRCKD VOL
Row Match Enti 0 1 2	Y Class M1117 ASV AMBULANCE AVLB M60 TRKD AEV M113 TRCKD VOLCANO	Match Import Value	Import Value-0 N02333 N02249 N02280	Import Value-1 Code_1 Code_2 Code_3 Code_4	WHL, ASV,MITTY, EST SPACE,MULTI SPAC TRKD,M60,ML TRKD,M1131, MILY,M1 TRKD,M103,	Implif Volto 0 M1117 ASV AMBUI C70 AVLB M6I D66 AEV M113 TRCKD VOL M92 M992 I
Row Match Enti 0 1 2 3	Y Class M1117 ASV AMBULANCE AVLB M60 TRKD AEV M113 TRCKD VOLCANO M992 FAASV	Match Import Value	Import Value-0 N02333 N02249 N02280 N02688	Import Value-1 Code_1 Code_2 Code_3 Code_4 Code_5	WHL, ASV,MITT, EST SPACE,MULTI SPAC TRKD,M60,ML TRKD,MIT3 - VILV,MI TRKD,MIT3 - VILV,MI TRKD,MIT3 - VILV,MI TRKD,MITANK,M	M1117 ASV AMBU S., M1117 ASV AMBU J06 AVLB M61 D66 AEV M113 TRCKD VOL D92 M992 I A1 M992 I
Row Match Enti 0 1 2 3 4	y Class M1117 ASV AMBULANCE AVLB M60 TRKD AEV M113 TRCKD VOLCANO M992 FAASV M1A1	Match Import Value	Import Value-0 N02333 N02249 N02280 N02688 N02232	Import Value-1 Code_1 Code_2 Code_3 Code_4 Code_5	WHL, ASV,MITTA, EST SPACE,MULTI SPAC TRKD,M60,ML TRKD,MITA, MILV,MI TRKD,MITA, MILV,MI TRKD,MITANK,M TRKD,MITANK,M	American M1117 ASV AMBUI C70 AVLB M61 D66 AEV M113 TRCKD VOL M2 M992 I A1 IA2
Row Match Entri 0 1 2 3 4 5	y Class M1117 ASV AMBULANCE AVLB M60 TRKD AEV M113 TRCKD VOLCANO M992 FAASV M1A1	Match Import Value	Import Value-0 N02333 N02249 N02280 N02688 N02232	Import Value-1 Code_1 Code_2 Code_3 Code_4 Code_5 Code_6 Code_7	WHL, ASV,MITTA, EST SPACE,MULTI SPAC TRKD,M60,MLU TRKD,MITTA MULY,MI TRKD,MITTANK,M TRKD,MITTANK,M TRKD,MITTANK,M TRKD,MITTANK,M	APUE M1117 ASV AMBUI C70 AVLB M6I D66 AEV M113 TRCKD VOL M2 M992 I A1 A12 J2 M932 I A1 A12 J2 A932 I
Agent Match Enti 0 1 2 3 4 5 6	y Class M1112 ASV AMBULANCE AVLB M60 TRKD AEV M113 TRCKD VOLCANO M932 FAASV M1A1 M1A2	Match Import Value	import Value-0 N02333 N02249 N02280 N02688 N02232 N02233	Import Value-1 Code_1 Code_2 Code_3 Code_4 Code_5 Code_6 Code_7 Code_8	WHL, ASV,MTTTY, TEST SPACE,MULTI SPAC TRKD,M60,ML TRKD,MT3Y, MULY,MT TRKD,MT3Y, MULY,MT TRKD,MTTANK,M TRKD,MT13 FAMILY,M97 TRKD,MT13 FAMILY,M97	APPRIVATION M1117 ASV AMBUI C70 AVLB M6I D66 AEV M113 TRCKD VOL D92 M992 I A1 A2 3E1 FISTV M39
Row Match Entit	y Class M1117 ASV AMBULANCE AVLB M60 TRKD AEV M113 TRCKD VOLCANO M992 FASSV M1A1 M1A2 FISTV M981 TRKD	Match Import Value	Import Value-0 N02333 N02249 N0280 N02688 N02232 N02232 N02233	Import Value-1 Code_1 Code_2 Code_3 Code_4 Code_5 Code_6 Code_7 Code_8	WHL, ASV,MTTTA, EST SPACE,MULTI SPAC TRKD,M60,ML4 TRKD,M113TR MILY,M1 TRKD,M113TR MILY,M1 TRKD,M113TR MILY,M1 TRKD,M113TAMILY,M3 TRKD,M113TAMILY,M3 TRKD,M113TAMILY,M135	APPROVEMENT M1117 ASV AMBUI C70 AVLB M6I D66 AEV M113 TRCkD VOL D72 M992 I A1 AI A2 SEI S81 FISTV M99 A3 APC M1059 TRK
Row Match Enti 0 2 3 3 4 5 6 7 7 8	y Class M1117 ASV AMBULANCE AVLB M60 TRKD AEV M113 TRCKD VOLCANO M992 FASSV M1A1 M1A2 FISTV M981 TRKD	Match Import Value	Import Value-0 N02333 N02249 N0280 N02688 N02232 N02232 N02233	Import Value-1 Code_1 Code_2 Code_3 Code_4 Code_5 Code_6 Code_7 Code_8 Code_9 Code_10	WHL, ASV,MITTA, EST SPACE,MULTI SPAC TRKD,M60,ML TRKD,M1131 - ULV,M1 TRKD,M131 - ULV,M1 TRKD,M113 TANK,M TRKD,M113 FAMILY,M1 TRKD,M113 FAMILY,M1 TRKD,M113 FAMILY,M1	Sample Totals M1117 ASV AMBUI C70 AVLB M61 D66 AEV M113 TRCKD VOL D2 M992 I A1 M92 I B1 FISTV M99 B2 APC M1059 TRK D67 APC M1059 TRK
Row Match Enti 0 1 2 3 4 5 6 7 7 7 8 9 9 9	y Class M1117 ASV AMBULANCE AVLB M60 TRKD AEV M113 TRCK0 VOLCANO M992 FAASV M1A1 M1A2 FISTV M981 TRKD APC M1059 TRKD SMK	Match Import Value	Import Value-0 N02333 N02249 N02280 N02688 N02232 N02233 N02353	Import Value-1 Code_1 Code_2 Code_3 Code_4 Code_5 Code_6 Code_7 Code_8 Code_9 Code_10	WHL, ASV,MITTA, EST SPACE,MULTI SPAC TRKD,MIGMLO TRKD,MITA, MILY,MI TRKD,MITA, MILY,MI TRKD,MITANK,M TRKD,MITANK,M TRKD,MITAFAMILY,MI TRKD,MITAFAMILY,MI TRKD,MITAFAMILY,MI TRKD,MITAFAMILY,MI	Apple 1000 M1117 ASV AMBUI C70 AVLB M6I D66 AEV M113 TRCKD VOL M92 M932 I A1 Jaza J81 FISTV M39 J83 APC M1059 TRK J67 Jaza J43 AAMB M113 TRK
Now Match Entition 0	y Class M1117 ASV AMBULANCE AVLB M60 TRKD AEV M113 TRCK0 VOLCANO M992 FAASV M1A1 M1A2 FISTV M981 TRKD APC M1059 TRKD SMK AAMB M113 TRKD FMC	Match Import Value	Import Value-0 N02333 N02249 N02280 N02232 N02232 N02233 N02352 N02352	Import Value-1 Code_1 Code_2 Code_3 Code_4 Code_5 Code_6 Code_7 Code_6 Code_9 Code_9 Code_10 Code_11 Code_12	WHL, ASV,MTTTA, TEST SPACE,MULTI SPACI TRKD,M60,MLU TRKD,M133 - MLV,M1 TRKD,M133 - MLV,M1 TRKD,M137 - MLV,M1 TRKD,M137 - AMLV,M97 TRKD,M137 - AMLV,M97 TRKD,M137 - AMLV,M137 TRKD,M137 - AMLV,M137 TRKD,M137 - AMLV,M137 TRKD,M137 - AMLV,M137 TRKD,M137 - AMLV,M137 TRKD,M137 - AMLV,M137 WHL,HMMWV,M1	Apple 1000 M1117 ASV AMBUI C70 AVLB M6I D66 AEV M113 TRCKD VOL M92 M932 I A1 Jaza J81 FISTV M39 J83 APC M1059 TRK J67 Jaza J43 AAMB M113 TRK
Row Match Enti 0 1 2 3 4 4 5 6 7 7 8 8 9 9 10 9 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1	y Class M1112 ASV AMBULANCE AVLB M60 TRKD AEV M113 TRCKD VOLCANO M932 FAASV M1A1 M1A2 FISTV M981 TRKD APC M1059 TRKD SMK AAMB M113 TRKD FMC WW ARMORED M1152 SPG9	Match Import Value	Import Value-0 N02333 N02249 N02688 N02232 N02233 N02330 N02353 N02352 N02352 N02477	Import Value-1 Code_1 Code_2 Code_3 Code_4 Code_5 Code_6 Code_7 Code_6 Code_9 Code_9 Code_10 Code_11 Code_12	WHL, ASV,MTTTA, TEST SPACE,MULTI SPACI TRKD,M60,ML TRKD,M1331 401 V,M1 TRKD,M1331 401 V,M1 TRKD,M1331 TANK,M TRKD,M131 FAMIL V,M3 TRKD,M133 FAMIL V,M3 TRKD,M133 FAMIL V,M13 TRKD,M133 FAMIL V,M13 TRKD,M133 FAMIL V,M11 TRKD,M133 FAMIL V,M11 WHL,HMMWVV,M1	Fight Factor M1117 ASV AMBUI C70 AVLB M61 D66 AEV M113 TRCKD VOL D72 M992 I D41 M992 I D41 M992 I D42 M992 I D43 APC M1059 TRK D67 AA3 AAMB M113 TRK D67 AA3 AAMB M113 TRK D52 HMMWV ARMORED AMBULANCI M992 I
0 1 2 3 4 5 6 7 7 8 9 9 10 11 HMI V 4 13	y Class M1112 ASV AMBULANCE AVLB M60 TRKD AEV M113 TRCKD VOLCANO M932 FAASV M1A1 M1A2 FISTV M981 TRKD APC M1059 TRKD SMK AAMB M113 TRKD FMC WW ARMORED M1152 SPG9	Match Import Value	Import Value-0 N02333 N02249 N02688 N02232 N02233 N02330 N02353 N02352 N02352 N02477	Import Value-1 Code_1 Code_2 Code_3 Code_4 Code_5 Code_6 Code_7 Code_8 Code_9 Code_10 Code_11 Code_12 Code_13	WHL, ASV,MITTA, EST SPACE,MULTI SPAC TRKD,M60,ML TRKD,M133, ULV,M1 TRKD,M134, ULV,M1 TRKD,M1 TANK,M TRKD,M1 TANK,M TRKD,M1 TANK,M TRKD,M1 TANK,M TRKD,M1 TANKLY,M15 TRKD,M1 TANKLY,M15 TRKD,M1 TAMILV,M15 TRKD,M1 TAMILV,M15 UVHL,HMMWV,M WHL,HMMWV,M	Same M1117 ASV AMBUI C70 AVLB M61 D66 AEV M113 TRCKD VOL M2 M992 I A1 M92 I B81 FISTV M99 A3 APC M1059 TBK D67 AAMB M113 TRK IS2 HMMWV ARMORED M113. M98 HMMWV ARMORED M115. MMULANCI A1 M0010 M110.

oad Table w/Lookup Key | Clear Table | Update OBS Classes | Dismiss

Read a CSV text file

Uses MCLID or System Name as matching key
 Follow on columns are user defined items

Supports Updating a few Data Items
 Replace DIA Equipment Code
 Replace 2525C Symbol Code

Replace NSN value

Use GUI to select type and selected column
 Dynamically selects column of data in text file

Use the "OBS Fix/Repair" Menu
 Found on OBS Data Displayer GUI

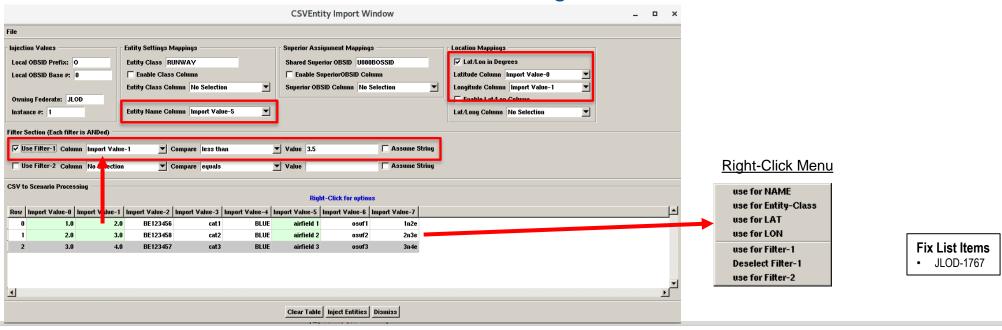
Fix List Items
 JLOD-1763



ForceGen – Use CSV Text file to inject Entities



- Read a CSV text file
 - >Assumes NAME, Lat, Lon, or Lat/Lon present
 - Follow on columns are user defined items
 - Simple way to inject a table of entities
- Use GUI to select type and selected column
 Right-click in column will auto-fill the combo box





NATO NETN FOM Improvements



NETN-ORG and Msg-201 Support

NETN-ORG Support

- >JLOD Sim starts with NO sides or Units/Systems
- Dynamic support of Sides
- Dynamic creation of scenario from federation
- Dynamic support of owned Units/Systems/Installations
- Minor Test Rig to test that uses OBS file as scenario source

NETN-ETR Support

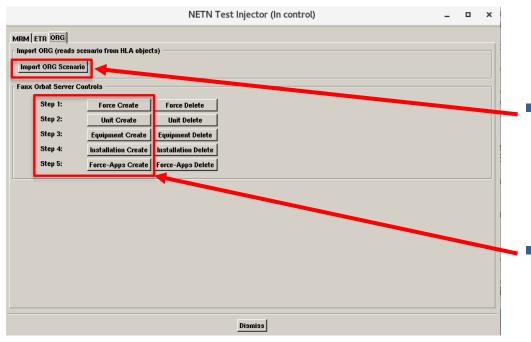
Minimum Viable Product – Reports capabilities supported.





NETN Organization (ORG) FOM





Fix List Items

JLOD-1708
JLOD-1107

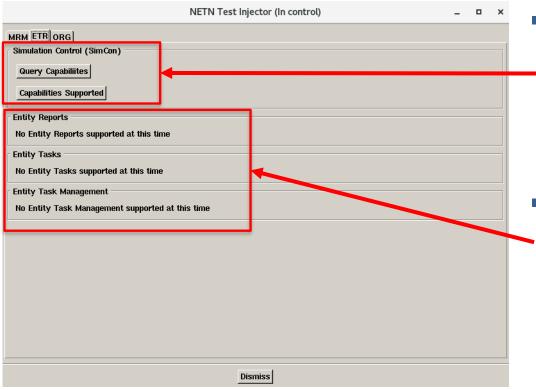
ORG Tab Support Two Functions

- Import Scenario from Federation
- Faux ORBAT Server functionality
- Federation Inject of Scenario
 - JLOD starts with NO scenario data
 - Press Import ORG to inject scenario
 - Faux ORBAT Server Testing Rig
 - Uses OBS to mimic Orbat Server
 - Must use another JLOD instance
 - Takes OBS file and creates ORG objects



NETN Organization (ETR) FOM





- ETR Tab Support One Function
 - Response to ETR capabilities supported
 - No ETR additional feature supported
- Entity Tasking / Report Placeholders
 - Did not expose cross model commands





NETN Organization (MRM) FOM



MRM ETR ORG		
MDM[ETR] ORG		
UUID clipboard value Generate UUID Reset UUID		
Selected Unit Name Unit OBSID R		
Response Interactions		
Send Response Success		
Send Capabilities Aggregate Disaggregate Divide Merge Activate Inactivate		
Request Interactions	-	
Unit ID [Federate Name		
Commands Arguments		
Commands Arguments Aggregate Remove SubUnits		
DeAggregate		
Divide		
Query Capabilities Activate		
De-Activate Remove Unit		
Dismiss		

- MRM Tab Support Two Functions
 - Report Capabilities supported
 - Test Rig to inject MRM Commands
- Report Capabilities Supported
 - Toggle Response capabilities
- MRM Command Inject Test-Rig
 - Enter both Unit ID and Federate
 - Select command to inject
 - Optional arguments
- UUID Clipboard
 - Generate / Reset / Enter ID
 - Select Unit and use its UUID

Fix List Items • JLOD-1708 • JLOD-1107

Improve Simulation Report for NETN



	Simulation Report (In control)	-	×
File TOE Display			
Name	FA-18_2689		
JLOD Data JLVC Fed	leration OBS Data JLOD Internal JLOD BaseData		
Status	Active		
Side Name	NORWAY		
OBS ID	U0000001279		
UUD	23380e1a-b037-becf-85bd-4568ba8eb5a6		
UIC			
URN			
Faction ID	9		
OBS Owner	JCATS/1		
Sim Owner	JLOD/1		
$\overline{\Pi}$			
	→		

- Reporting of UUID of Entity
 - Displays human readable string
- Entity Reports can Search on ID





JLVC Modernization Supports



- Added Flight Path Name to TEL Fire Plan I/O
- Save/Restore CBRN Entity States
- Save/Restore Entity Enhanced Casualty/Damage States
- Added simple Tag/Value data for unplanned I/O on Entities and Scenario
- Added Named Lists to Defense Area I/O stream
- Added optional MSEL Symbol Modifier to Entities



JLOD-1770

JI OD-1782

Enables new Capabilities / Features via a Patch



Added Damage-Code Editor



andom Dam	age Codes Tabl	e							
FilterCode	M-Kill 💆	DamageCodes	LMTV ENGINE		2	InjectCode	ClearTable		
Code	Description			pDraw (0-100)	Time Multiplie				
106			ATV WINDSHIELD						
145		STRYKER IN	MAGING MODULE						
101			LMTV ENGINE	33	1				

- JSJ7 Modernization Effort
 - Supports table of specific damages
- Builds Table of Damages
 - Probability of drawing a given code



Fix List Items
 JLOD-1706



Batch Mode supported in Planner

- Supports optionally display of Planner GUI
 Planner batch mode defaults to NO GUI use
 - ≻Use command line argument "-useGUI" to enable Planner GUI

Batch Execution only Supported via Command Line

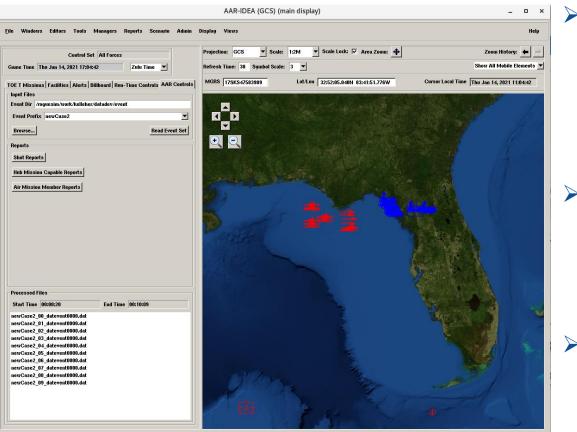






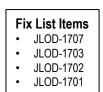
Experimental After Action Tool - AARIdea





- Experimental AAR Tool
 Uses a Planner Engine as base
 Internal LLNL tool
 Used to examine batch Event Files
 Very Limited Shot Reports only
- Event Files Still evolving
 Format and content are in flux
 Expect to change over patches until final
 Sim Engines built to log across federations

Experimental Event Records Air Force ACE Study Event Records



Only Supported via Command Line



New Filter Attributes



Filter Attributes used in Reports, Raster Displays, TOE filtering

Grouping	Attribute	Description	Range of Values
Capabilities			
	Has Repair/Damages Capabilities	Entity can repair Equipment	Has capability or Not
	Has Repair/Treatment Capabilities	Entity can treat Lifeforms	Has capability or Not

Fix List Items
 JLOD-1771



Questions?



22. Mark Piscotty – CSL Program Lead 925-422-2052 Brian Stevenson – CSL Operations Manager 925-424-6149



Lawrence Livermore National Laboratory



Backups



