

Non-Joint-Owned M&S used by Joint Components

Model Uses: 5-on 5 swaps - 03 Ls

Model	Name	Description	User	Config Mgt Authority	Model Uses:			HLA Recommendation											
					ANALYSIS	TRAINING	ACQUISITION	HLA, DIS, or JMWARS will replace?	Convert ASAP	Convert Later	Retire	Waiver							
AEM	Arsenal Exchange Model Processor	AEM is based on the linear programming algorithm for evaluation of a one- or two-sided nuclear exchange. AEM uses a force structure(s) combined with its related strategic planning factors and allocates weapons against an opponent's target base.	USAF Studies and Analysis	USAF	SIOIP analysis for J5 (Aug 96, Nov 96), Arms Control and Basing (May 96), RISOP 97 (Apr 96)	None	None	Strategic Nuclear Mission Assessment for DAWMIS (Nov 96)	High	Men Critically	Used w/WHAT other simulations?	FROBAK and SODSIM	ALSP, etc.	No	HLA, DIS, or JMWARS will replace?	Convert ASAP	Convert Later	Retire	Waiver
AEM	Arsenal Exchange Model	AEM is an aggregated, two sided strategic exchange model designed to address strategic force analysis problems.	US STRAT COM	USAF Studies and Analysis Agency	Production of RISOP (Red Integrated Strategic Offensive Plan), ongoing. Model and evaluate United States future strategic forces.	0	0	High	0	0	0	N/A	N/A	High fidelity 1 vs 1 engineering level model					
AIRADE	Airborne Radar Detection	AIRADE allows the user to simulate an engagement between an airborne radar platform and a single airborne target.	US STRAT COM	USAF Wright Lab /AAAWA-1	Engineering level model used to support production of SIOIP 9X. Continuous feasibility analysis process.	None	None	Med	None	0	0	N/A	N/A	High fidelity 1 vs 1 engineering level model					
ALARMS	Advanced Low Altitude Radar Model	ALARMS is a high fidelity engineering-level ground based radar model which provides antenna propagation patterns, areas where penetrating aircraft are detected by radars in an integrated air defense system, and signal-to-noise (S/N) ratio contours of ground	US STRAT COM	USAF Wright Lab /AAAWA-1	Engineering level model used for 1 vs 1 analysis supporting production of SIOIP 9X. Ongoing feasibility analysis.	None	None	Med	0	0	0	N/A	N/A	N/A High fidelity engineering level model of 1vs1 ground radars.					
DIME /ADC3	Digital Integrated Model Environment /Air Defense Command, Control, Comm	DIME provides a graphical user interface (GUI) and common architecture for data sharing.	US STRAT COM	USAF Natl Air Intelligence Ctr (NAIC)	Analysis of SIOIP 9X. Ongoing feasibility analysis.	None	None	Med - Low	Possibly future use with EADSIM	0	0	N/A	N/A	N/A					

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EADSIM	Extended Air Defense Simulation	A force on force model that includes joint air defense systems. It has a robust capability to perform communications modeling	Joint Staff	--	Common link analysis. Close Air Support Communication Link Analysis (Sept 96). Cruise missile defense study commo analysis (Dec 96/Jan 97)	None	None	None	Low	Used w/WHAT other Simulations?	HLA, DIS, ALSP, etc. JVARs or JSIMS will Replace?	Convert ASAP	Convert Later	Retire	Waiver
EADSIM	Extended Air Defense Simulation	EADSIM is used primarily to analyze theater-level Extended Air Defense scenarios. It is specifically designed to evaluate effectiveness and efficiency of weapons systems against targets and to evaluate different mixes of forces or resources.	Joint Staff	Army, USA/SSDC	None	None	None	None	Low	CTEM	Not Sure	--	--	--	--
EADSIM	Extended Air Defense Simulation	Analytical model of air and missile warfare. EADSIM can model scenarios ranging from few-on-few to many-on-many, C2 decision processes, communications between platforms and intelligence collection and dissemination	US ACOM	Army U.S. Army Space and Strategic Defense Cmt, CSSD-BCT	Proposed model for analysis of JTMD doctrine issues raised by Air Force and Army (Nov96-Apr97)	Possible use in support of Roving Sands 97 (Feb-May 97)	None	--	--	training version-- training -CBS, analytic version-- only-- ACAAM, ALSP C/TAPS (using (CBS) ATO post-processor), CAPS, Thunder, or stand-alone	No	currently underway	--	--	--
EADSIM	Extended Air Defense Simulation	Analytic model of air & missile warfare used for scenarios ranging from few-on-few to many-on-many	US CENT COM	Army Space & Strategic Defense Cmt Testbed Product Office	CONPLAN development	IL96, RS96, RS97	None	Med	CAMDEN (Cooperative Air and Missile Defense Network)	DIS	No	--	--	--	Runs at approx nanosecond time resolution. Best air defense simulation available for analysis of alternatives.

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EADSIM	Extended Air Defense Simulation	EADSIM is used for aircraft penetration analysis up to the force on force level.	US STRAT COM	Army Space and Def Cnd /Testbed Product Office /OSSD-BC-T	War plan analysis. Force Structure Analysis	None	None	High	USSTRAT COM's Strategic War Planning System (SWPS)	DIS, ALSP	Possibly, but it is not clear whether JWARS/JSIMS will be built to the same fidelity currently and planned for EADSIM.	X	--	--	It is not clear whether JWARS/JSIMS will be built to the same fidelity currently and planned for EADSIM.
EPICODE	EPICODE	Predicts downwind chemical biological or nuclear hazard based on a known source function. This is a first order estimate based on a simple gaussian wind distribution.	US STRAT COM	LLNL (Lawrence Livermore Natl Lab)	Theater Support Plan. Continuous Feasibility Process	None	None	low	0	N/A	N/A	--	--	--	N/A
FROBAK	Front End-Back End	FROBAK is a series of five modules (Prober, DGZER, DAGGER, DEVAL, POSTAL) developed to expand the frobak allocation model into a process that allows for the treatment of detailed target data, defense modeling, and operational constraints.	Joint Staff	USAF Studies and Analysis	SIOP, Arms Control and Basing (May 96), RISOP 97 (Apr 96)	Yes, 3-day course	Strategic Nuclear Mission Assessment for DAWMS (Nov 96)	High	frobak and SODSIM	--	No	--	--	--	DGZ formulation, Nuclear Damage Analysis at the installation level
FROBAK	Front End Back End	FROBAK is a companion model to frobak that performs front end data processing, builds/aggregates DGZs, and provides capability to assess details of aggregate AEM.	US STRAT COM	USAF Studies and Analysis Agency	Production of RISOP (Red Offensive Plan), ongoing. Model and evaluate START I/II	None	None	High	0	0	N/A	--	--	--	N/A

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					ANALYSIS	TRAINING	ACQUISITION	HLA Msn Criticality	Used w/WHAT other Simulations?	HLA, DIS, ALSP, etc. Receives data from TACSIM in JTC.	JWARS or JSIMS will Replace?	Convert ASAP	Convert Later	Retire	Waiver
MIDS / IDB	Military Integrated Intelligence Data System / Integrated Database	DoD general military intelligence database of unit, facility, equipment and location data. Basic intelligence product to support JTF, components and simulation models. Database encompasses enemy (orange) force structure and facility/infrastructure data.	US ACOM	DIA	Unified Endeavor 97-1 Phase II (Oct 96), Phase III (Dec 96)	Training provided on as-needed basis for theater, JTF and component staffs.	None	High	MSDS	Receives data from TACSIM in JTC.	Yes	Convert ASAP	Convert Later	Retire	Waiver DATA BASE
MPS	Missile Performance System	MPS model calculates flight max-range, flight attitude, minimum energy flight path, and many more characteristics for ballistic missiles. It also calculates or checks footprints for MIRVed systems.	US STRAT COM	USAF Studies and Analysis Squadron at the Pentagon	Analysis of current and future force structure, ongoing. Ongoing feasibility analysis.	None	None	Low	AEM	N/A	No	Convert ASAP	Convert Later	Retire	N/A Currently looking at new model STAMP used by the Air Room
MUSE	Mapping, Charting, & Geodesy Utility Software Environment	MUSE utilities allow the user to display selected DMA standard overlays (socio-economic, political, etc.) on raster maps, conduct line of sight analysis as well as 3D views to support IPB and scenario development analysis.	US ACOM	DMA	Identify landing areas, ground & sea routes, to support JEBB-1 & 96-1 COAs (Jan 95, Jan-Apr 96); exploitation of DMA digital data sets	None	None	Low	None	No	No	Convert ASAP	Convert Later	Retire	N/A
NEMESIS\$	Nuclear Effects Models for Estimating Sensitivities to Input Scenarios	NEMESIS was designed to predict the free-field effects caused by nuclear bursts with yields ranging from 10 tons to 10 kt.	US STRAT COM	DSWA	Production of SIOF 9X and Theater Nuclear Planning Documents. Continuous feasibility process.	None	None	Low	PDCALC, FAS/CIVIC	N/A	N/A	Convert ASAP	Convert Later	Retire	N/A
PDWIN	Probability of Damage (under windows environment)	Used by the USSTRATCOM Airborne Battle Staff to determine probability of damage on selected targets.	US STRAT COM	DSWA	0	0	Med	--	N/A	N/A	No	Convert ASAP	Convert Later	Retire	N/A

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PEARL S	Persistent Environments and Aircraft Response Model	PEARL was developed by SAIC for DNA to model the interception of dust by SIOF air routes (aircraft and cruise missiles).	US STRAT COM	SAIC Corp	Production of SIOF 9X. Model and evaluate START I/II. Ongoing feasibility analysis.	None	None	Med	Men Criticality	Used w/WHAT other Simulations?	N/A	N/A	N/A	Convert ASAP	Convert Later	Retire	Waiver	
RADGUNS S	RADAR Directed GUN-Systems Simulation	An engineering-level-of-detail model which provides probability of kill data for various anti-aircraft artillery (AAA) systems versus a host of aircraft.	US STRAT COM	NGIC, DWIGHT FITZSIMO NS, (CHARLOTTESVILLE, VA)	Production of SIOF 9X. Continuous feasibility analysis process.	None	None	LOW	None (Stand alone model)	N/A	N/A	N/A	---	---	---	N/A		
SAS	Statistical Analysis System	COTS data analysis package used by J531 to determine the compound damage expectancy by installation groups.	US STRAT COM	SAS Institute Inc. SAS Circle Box 8000 Cary, NC 27512-8000	Analysis of SIOF annually (Jun-Aug) and as required. Ongoing Feasibility Analysis	None	None	High	Uses data from SODSIM and SIOF files to analyze results of annual SIOF War Game. All data are in flat file format.	N/A	N/A	N/A	---	---	---	N/A		
SIPS S	SLBM Integrated Planning System	SIPS supports the following: Deliberate and crisis planning of SLBM weapon systems. Patrol Area analysis. Range arc and footprint achievability.	US STRAT COM	Navy NSWC Dahlgren	Force structure analysis, target base management	None	None	Med	AEM	---	N/A	---	---	---	---	N/A		
SODSIM S	Strategic Offense-Defense Simulation	SODSIM simulates the end-to-end interactions of force exchanges involving RED and BLUE strategic offensive and defensive forces.	US STRAT COM	BLIME, Inc (owner) 7322 Lackawan na Dr, Springfield VA 22150	Analysis of SIOF 9X and Annual Wargame (Jun-Aug). Model and evaluate START I/II	None	None	High	None	None	Possibly	---	---	---	---	---	---	---

If full functional level of fidelity as SODSIM. COTS. Not sure whether JWARS/JSIMS will be built to the same level of fidelity as SODSIM.

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STRATCAT	Strategic C3 Assessment Tool	A decision support software tool designed to help battle staff personnel in the Command Center, MCCC, ABNCP and Staff personnel to make timely assessments of STRATCOM C3 systems connectivity operating in stressed or benign environments.	US STRAT COM / Defense Special Weapons Agency (DSWA)	USAF Studies and Analysis Agency	None	Uchi Focus Lens 96 (Aug 96), Component Training - Blue Flag 96-4 (Sep 96), Allied Nation Training - Yama Sakura XXXI (Jan 97)	None	High	None, Stand Alone	N/A	N/A	--	--	--	N/A
TAMP	Tactical Aircraft Mission Planning System	TAMP provides flight path comparisons, strip charts, fuel usage, and visualization of threats and terrain, among others.	US STRAT COM	Navy Naval Research & Development (NRAD) Det Philadelphia	Ongoing feasibility analysis. Production of SIOP 9X.	System Administrator training at the Navy Marine Intelligence Training Center	None	Medium	Routes created on TAMP are downloaded into EADSIM	N/A	N/A	--	--	--	N/A
TRAMS	Technical Radar Analysis Modeling Simulation	TRAMS is a high fidelity engineering level model used to generate probability of detection (PD) coefficients for ground based radars.	US STRAT COM	USAF Wright Labs/AA WMA-1	Engineering level analysis supporting production of SIOP 9X. Ongoing feasibility analysis.	None	None	Low	None	N/A	N/A	--	--	--	N/A