

AFSOC JTAC SIMULATOR COMPARISON

HURLBURT FLD, FL 15 – 19 AUGUST 2011



THE AFSOC SIMULATOR COMPARISON WAS CONDUCTED IN THE FOLLOWING MANNER. EACH SIMULATOR (VENDOR) WAS GIVEN EIGHT IDENTICAL CLOSE AIR SUPPORT (CAS) PROFILES TO PERFORM DURING THEIR DEMONSTRATE PROFILES UTILIZED BY THE JOINT FIRE SUPPORT EXECUTIVE STEERING COMMITTEE DURING SIMULATOR ACCREDITATIONS. EACH SIMULATOR WAS SET-UP BY THE VENDOR. ONCE SIMULATOR SET-UP WAS COMPLETE, EACH VENDOR WAS ALLOWED TO HAVE THEIR SIMULATOR PERFORM IN WHOLE OR PART THE EIGHT CAS PROFILES (OBSERVATION TEAM JTAC TRAINEE EXECUTED MISSIONS). SIMULATORS WERE THEN TURNED OVER TO OBSERVATION TEAM TO EVALUATE EASE OF SIMULATOR OPERATIONS. THE OBSERVATION TEAM CONSISTED OF A MINIMUM OF TWO CIVILIAN CONTRACTORS (STS JTAC PROGRAM MANAGERS) AND A JTAC SME PER SYSTEM.

JFPL (MARSOC, CAMP LEJUENE) (10 AUG 2011)

NOVA TECHNOLOGIES

PROs

- INTEGRATION W/ SOFPREP (REAL WORLD REHEARSAL) Special Operations Forces Planning, Rehearsal, and Execution preparation
- FIVE STUDENT STATIONS AT A TIME
- NVG INTEGRATION AND FILTERS FOR REAL WORLD NVG
- 15 PROJECTORS FOR HIGH FIDELITY (PHASE III)
- SHARE SCENARIOS WITH OTHER (RUN-TIME SCENARIOS CAN BE SAVED)
- ACCREDITED
- CAPABLE OF LINK TO DMOC (NOT PROVEN)
- VIRTUAL CF-19 WITH FALCONVIEW
- GREAT VIRTUAL MILITARY EQUIPMENT (VME)
- 180 DEGREE VIEW WITH THE THREE PANELS (PHASE II) OR DOME (PHASE III)
- PHASE II AND PHASE III COMES WITH PHASE I (PORTABLE SYSTEM)
- CONTRACT COMES WITH OWN OPERATOR AND MAINTENANCE FOR A YEAR
- OPERATOR CONTROLS INCLUDES DROP-DOWN MENU.
- HAS CLEAR HOT AND ABORT BOTTONS

CONs

- COMPLEX TO OPERATE (MOSBE scenario development program (part of NOVA) NOT FUNDED ANYMORE/ JSAF (joint semi-automated forces) HARDER TO OPERATE)
- LIMITED PROGRAM INTERFACE WITH JSAF
- ONLY 10 DATABASES SO FAR
- NO WEAPONS
- ONLY ONE SET OF FLYERS AT A TIME
- DAGR NOT ACCURATE, IS EXPENSIVE, AND IS MISSING 90% OF FUNCTIONS
- NO LITEFLITE OR SIMILAR
- NO VDL CAPABILITY
- CRASHED 3 TIMES IN A SHORT TIME
- HIGH CEILINGS NEEDED FOR THE SIMULATED MILITARY EQUIPMENT TO OPERATED
- NO INTEGRATION OF PERSONAL COMMUNICATION EQUIPMENT

SAGIS (HURLBURT FIELD)

NOVA TECHNOLOGIES

- SAME AS ABOVE (SAME CREATOR)
- HAS INTEGRATED VOICE COMMANDS (AUTOMATED PILOT RESPONSE) (PRO)
- PLUS THE FOLLOWING CONS
- NEEDS SEPARATE ROOM JUST TO ACCOMMODATE THE LARGE AMOUNT OF COMPUTERS (MUST HAVE OWN AIR CONDITIONER AS WELL)
- LTD DOES NOT LAZE BOMBS ACCURATELY
- ONCE THE A/C DEPARTS THE IP, YOU CANNOT CHANGE ORDNANCE

CFFT (JTAC PROGRAM LINE) (MOBILE UNIT BROUGHT TO HURLBURT FIELD)

FIDELITY TECHNOLOGY

PROs

- USER USES OWN EQUIPMENT AND WEAPONS
- VME CAN INDUCE WEAPON/EQUIPMENT MALFUNCTIONS
- COMPANY IS WILLING TO CUSTOMIZE ANY EQUIPMENT (AT A COST)
- AAR (LOGGING OF TRAINING DATABASE) (CAN CREATE A TRAINING LOG FOR EACH STUDENT)
- CAS/ARTY INTEGRATION
- LASER SPOT SEARCH/TRACK – TERMINAL GUIDANCE IS TRUE

- IZLID IS ACCURATE
- COMPANY (FIDELITY) WON THE JTC TRS CONTRACT – MAYBE WE CAN INTEGRATE THE IMPROVEMENTS WE MAKE ON THE CFFT TO THE JTC TRS
- SAVES SCENARIOS
- SCENARIO BUILDING IS NOT COMPLEX
- REAL WORLD MAPS
- VDL W/SEPARATE DISPLAY
- IR MARKING FROM A/C
- INTEGRATION W/VIRTRA SYSTEMS TO GET MORE WEAPONS INTEGRATED
- COMES WITH CO2 RE-CHARGE STATION FOR WEAPONS
- OPERATOR CAN DROP ORDNANCES/STRAFE AT WILL (GOD KILL) TO SIMULATE TROOPS IN CONTACT (REAL-TIME)
- DMPI SORT AND WEAPON SELECT REAL-TIME
- XBOX CONTROLLER
- CAN CREATE WEAPONS MALFUNCTIONS AND ALSO HAS A ELECTRICAL SHOCK DEVISE TO SIMULATE TRAINEE GETTING SHOT
- CONTROLLER CAN WORK FROM GAF OR HAF
- INCORPORATES ALL UP-GRADES IN SOFTWARE UPDATES
- WEAPONS MINIMUM SAFE DISTANCES ARE ACCURATE
- INCLUDES WEAPONS TRAINIG SCENARIO
- MARK FRIENDLY POSITION WITH STRONG IR
- NVG VIEW SIMULATION (AND IR) ON THE SCREEN

CONs

- BATTLEFIELD EFFECTS NEED TO BE MORE REALISTIC
- HMD NEEDS COMPASS RIBBON
- NO ARMED PRED OR REAPER
- SCREEN FREEZES / JUMPS
- NO SOFLAM (ONLY LLDR)
- AIRCRAFT CAN'T BE SHOT DOWN (NOT REALISTIC)
- THREATS DON'T HAVE A REALISTIC RANGE
- VERY LIMITED AUDIO FILES /EFFECTS
- NO TTT, ONLY TOT
- NO SOFPREP INTEGRATION YET
- NO TT PRIOR TO SELECTING TO DEPART IP
- LOW FIDELITY OF PROJECTOR
- FORCED TO USE PROJECTOR TO BE ABLE TO USE ALL EQUIPMENT
- NO LEVEL/HIGH/MED/LOW DELIVERIES OPTIONS (HAS TO BE DONE ALL MANUALLY)
- NO FUZING OPTIONS FOR MUNITIONS
- VME/SIMULATED MILITARY EQUIPMENT NVGs ONLY (NO REAL NVGs)

- A LOT OF “YES...WE CAN DO THAT..” FROM CONTRACTORS, BUT WERE UNABLE TO VERIFY UTILIZING THE DEMO SET-UP
- NO MULTIPLE FLIGHTS CAN OPERATE AT ONE TIME
- NO VDL CODES
- NO ATTACKS FROM THE “WHEEL”
- NO FINAL ATTACK HEADING INPUTS
- HMD FIELD OF VIEW IS LIMITED
- LACK OF WEAPONS DATABASE
- NO WEAPON INTEGRATION WITH CAS SCENARIOS (JUST WITH THE WEAPONS TRAINING SCENARIOS)

I-FACT, MEGGIT (HURLBURT FIELD)

PROs

- INTEGRATED WEAPON SYSTEM W/CAS SCENARIO
- TERMINAL GUIDANCE CAPABLE
- MULTIPLE ASSETS AT ONE TIME
- SCENARIO REPLAY
- SUAS SIM INTEGRATION
- “L.I.F.E” PROGRAM TO CREATE BEHAVIORS ON PEOPLE, VEHICLES, ETC (NOT IN PLACE YET...SAID IT WOULD BE FIELDED SOON)
- HAS REPLAY FOR DEBRIEFS (BUT VERY LIMITED TO ITS OWN HEADSETS)
- VIRTUAL NVGs/IR
- COST FOR UPGRADING ONLY, NO NEW SYSTEMS
- SMALL/MEDIUM/LG/DOME CAPES
- CAN LINK WITH DMO (BUT NOT CONNECTED RIGHT NOW FOR US TO LOOK AT)

CONs

- POOR GRAPHICS
- SYSTEM OPERATOR SCENARIO BUILDING VERY COMPLEX
- HMD BULKY AND NEEDS TO MIRROR DISPLAY SHOWN ON BIG SCREEN
- NEEDS UPDATED FORM FITTING EQUIPMENT
- LASER SPOT TRACKER ONLY THROUGH LITEFLIGHT
- FMV GRAPHICS DON'T CORRELATE WITH SCENARIO
- GEOPLOT MAPS NEED TO BE FV CAPABLE
- BATTLE EFFECTS UNREALISTIC (GUN PASSES DON'T IMPACT HOW THEY SHOULD, WP ROUND DESTROYS VEHICLE/BUILDINGS)
- VERY ACADEMIC ORIENTED, CAN'T SIMULATE TACTICAL DISCIPLINE
- A/C CAN'T SPARKLE TARGETS

- LIMITED A/C CAPABILITIES WITHOUT LITEFLIGHT (CAN'T CHANGE DIVE ANGLE, NO CLEAREDHOT/REATTACK BUTTON)
- CAN'T ANSWER DIRECT QUESTIONS ON TIME TO BUILD NEW EQUIPMENT (MIDDLEMAN)
- NO SIM OPERATOR INCLUDED
- A LOT OF GAMING THE SYSTEM TO MAKE IT REALISTIC
- REPLAY VOICE THROUGH HEADSET ONLY OR NEED EXTERNAL SPEAKER
- NO FUSING CAPABILITY FOR WEAPONS
- NO ARMED OR UNARMED MQ-1/MQ-9
- CAN'T REMAP JOYSTICK OR CONTROLLER WITHOUT KNOWLEDGE OF CONFIG FILES
- NO ENVIRONMENTAL SOUND EFFECTS
- QUESTIONABLE
- INTERACTION WITH SOFPREP FOR NEW DATABASES
- SAY THEY HAVE A WAY-AHEAD PLANNED (USERS PAY)
- DMO ACCESS

METAVR (HURLBURT, PORTABLE DEMO)

PROs

- ANY SIZE SCREEN CAN BE USED/DOME
- EASY TO AUTHOR SCENARIOS
- MULTIPLE AIRCRAFT CAPABILITIES
- REALISTIC EFFECTS/SCENARIO/PROFILES/BOMB EFFECTS/BEHAVIORS
- CERTAIN WEAPON CAN ONLY KILL CERTAIN ENTITIES (WEAPON TO-TARGET PROPORTIONALITY)
- HUNDREDS OF ENTITIES/MODELS/OBJECTS
- GROUPING OF ENTITIES TO MAKE REACTIONS/BEHAVIORS (BY GROUP)
- FALCONVIEW MAPS OF WORLD TO CREATE SCENARIOS ANYWHERE/REHEARSAL
- CAN CONFIGURE WEAPONS EFFECTS
- USE ANY GAME CONTROLLER/JOYSTICK/ CAN BE MAP BY THE OPERATOR
- ROVER FEED WITH DIFFERENT POD VIEWS
- TGO
- SAVE SCENARIOS W/OUT OVER WRITE THE ORIGINAL
- AAR REPLAY
- COMPANY OPEN TO CHANGES
- PROVIDES QUARTERLY UP-GRADES
- COMPANY WILL PAY FOR A LOT OF CUSTOMIZATION
- REALISTIC THREAT RINGS
- HMD NOT BULKY. MOVES WITH CONTROLLERS HEAD AND DOES NOT COVER THE VISION/SA OF ENVIRONMENT
- ATTACH TO ANY ENTITY
- ENTITIES CAN BE CHANGED REAL-TIME AS WELL AS 9-LINES

- ONE YEAR MAINTENANCE INCLUDED
- DIVERSE MSN PROFILES
- SUPPORTS DTED (ELEVATION CORRELATION)
- CLEARED HOT BUTTON
- ENTITIES USE REAL-WORLD CHARACTERISTICS
- MOVE/SHOOT/COMMUNICATE IN THE SCENARIO (VIRTUAL WEAPON/RUN, WALK)
- SOFTWARE BASE, NO NEED FOR BULKY HARDWARE
- CAN PLUG IN RISK ESTIMATE DISTANCES
- BLUE ON BLUE MISTAKES ALLOWED FOR REALISTIC TRAINING
- VERY MOBILE. CAN BE LOADED INTO ANY COMPUTER, THEN SHARE THE DONGGLE TO USE ANYWHERE
- DID NOT CRASH ONCE

CONS

- MACE (Modern Air Combat Environment) SOFTWARE NOT ACCREDITED
- NO WEAPONS (SIMULATED MILITARY EQUIPMENT)
- LIMITED SIMULATED MILITARY EQUIPMENT /VME
- A/C CAN'T SPARKLE TARGETS
- NO TTT/TOT
- NO FUSING OPTION FOR WEAPONS (BUT YOU CAN WORK-AROUND MANUALLY)
- NO ILLUM FLARES
- NO WIND SOCK
- COMPASS ROSE VS. COMPASS RIBBON
- PILOT CENTRIC
- NO FINAL ATTACK HEADING
- CULTURAL ATMOSPHERE IS UNUSABLE

NOTE: QUESTIONS FOR EACH SYSTEM:

- MILCON IS QUESTIONABLE FOR EACH OF THE SYSTEMS
- DOES IT COME WITH AN OPERATOR
- WHAT IS THE PRODUCTION/DELIVERY TIME
- UTILIZATION OF CURRENT SYSTEM
 - o HOW LONG ARE SYSTEMS DOWN DUE TO MAINTENANCE
 - o WHAT IS THE RETURN TIME ON PARTS SENT IN FOR MAINTENANCE
 - o HOW MUCH ARE SYSTEMS BEING USED A MONTH

GRADING:

THE FOLLOWING TABLE COMPILES SCORES ON EACH SYSTEM AS PROVIDED BY THE EVALUATION TEAM.

THE SIMULATORS WERE GRADED ON A 1 – 5 POINT SYSTEM. 1 POINT BEING THE BEST AND 5 BEING THE WORST. THE SIMULATOR WITH LEAST AMOUNT OF POINTS IS THE SIMULATOR THAT BEST MEETS OUR JTAC REQUIREMENTS.

SCORING CONSIDERATIONS:

AREA 1: ABILITY TO PERFORM CAS PROFILES AS OUTLINED BY JFS ESC ACCREDITATION PROFILES

AREA 2: EASE OF OPERATION FROM THE SIMULATOR OPERATORS PERSPECTIVE/CREATE, CHANGE AND SAVE/SHARE JTAC TRAINING SCENARIOS

AREA 3: ABILITY TO FACILITATE/ENHANCE JTAC TRAINING THROUGH SIMULATION

AREA 4: ENVIRONMENT GENERATOR/GRAPHIC RESOLUTION FROM JTAC TRAINEE PERSPECTIVE WITH AND/OR WITHOUT HEAD MOUNTED DISPLAY

AREA 5: ABILITY TO INTEGRATE SIMULATED MILITARY EQUIPMENT

AREA 6: ABILITY TO CONNECT TO DMOC/DTOC AND INTEGRATE WITH OTHER SIMULATION SYSTEMS

NAME	JC	MG	TM	TG	MZ	FB
SAGIS	4	4	4	3	5	4
JFPL	3	3	3	4	4	3
I-FACT	5	5	5	5	3	5
CFFT	2	2	2	2	2	2
METAVR	1	1	1	1	1	1

RESULTS: THE SIMULATOR WITH LEAST AMOUNT OF POINTS IS THE SIMULATOR THAT BEST MEETS OUR JTAC REQUIREMENTS.

SAGIS	24
JFPL	20
I-FACT	28
CFFT	12
METAVR	6