

**FLIGHT SCHOOL XXI (FSXXI)**  
**SIMULATION SERVICES REQUIREMENTS DOCUMENT**  
**(SSRD) (Change 1)**

**18 June 2003**

## SSRD Change Listing

### Change Number 1 Summary:

The requirement “...schedule and operate the UH-1H Flight Simulators ....” has been deleted and replaced with “...schedule the UH1H Flight Simulators...”.

This change impacts the following pages and paragraphs:

Page 4, paragraph 1.3 (Proposed System), 36th and 37th lines.

Page 8, KPP 1-6, 3rd line.

Page 26, paragraph 4.1.1.1.6 (KPP I-6), 3rd line.

Page 37, paragraph 7.1.1 (IOC Block I), 9th line.

Page 38, paragraph 7.2.1 (FOC Block I), 8th line.

Page D-2, paragraph 1.d, 3rd line.

Page E-2, paragraph 1.d, 1st line on page.

Change pages are provided below.

services requirement were eliminated, and to prevent confusion, the title of the document was changed from ORD to SSRD.

1.3 Proposed System. The FSXXI Simulation service requirement consists of three parts: the TH-67 virtual simulators (VS), the advanced aircraft virtual simulators (AAVS), and the training support capability.

The TH-67 VSs are required to support FSXXI Phase I Primary Core training, the RWIFEC, and Advanced IFR training. The number of TH-67 VSs will be as required to meet the Phase I Primary Core, RWIFEC, and Advanced IFR training requirements defined in paragraph 4.

The AAVSs are required to support training in the FSXXI Phase II Advanced Tracks, AQCs, PME courses, MTP Courses, IPCs, MOI Courses, Spanish-IRTC, pre-deployment ATXs, and AC/RC sustainment training. The Block I (threshold) AAVSs will include aircraft configurations for the AH-64D, UH-60A/L, CH-47D, and OH-58D aircraft. Concurrency upgrades for the the Block I aircraft configurations will include upgrades from the CH-47D to the CH-47F and from the UH-60A/L to the UH-60M. The Block II (objective) AAVSs may include configurations for other aircraft in the future including the RAH-66 aircraft. Integration of additional aircraft configurations will be based on development and fielding schedules of the actual aircraft. The number of AAVSs will be as required to meet the Phase II Advanced Track, AQC, PME, MTP, IPC, MOI, IRTC, ATX, and AC/RC sustainment training requirements defined in paragraph 4.

Current simulators (UH-60 Synthetic Flight Training Systems (SFTS), CH-47 SFTS, UH-1 Flight Simulators, and Combat Aviation Simulation (CAVSIM) Facility training devices) will continue to be used as necessary to meet the training requirement until all applicable training is transitioned to the TH-67 VSs and AAVSs. As the FSXXI simulators become operational at USAAVNC, the current simulators no longer needed for training at USAAVNC will move to AC/RC locations to support unit training, made available for foreign military sales, or otherwise disposed of. The Aviation Combined Arms Tactical Trainer-Aviation Reconfigurable Manned Simulator (AVCATT-A), Longbow Crew Trainers (LCT), and two UH-1H Flight Simulators will continue to support training at USAAVNC before, during, and after transition to the TH-67 VSs and AAVSs.

The functionality and fidelity; visual system; training environment; interoperability; and command, control, communication, computer, intelligence, surveillance, and reconnaissance (C4ISR) capabilities of the TH-67 VSs and AAVSs will be as required to train to standard the individual, crew, and collective tasks identified in paragraph 4 and to conduct individual, crew, collective, combined arms, and joint levels of training.

A training support capability is required to schedule, manage, operate, maintain, and upgrade the TH-67 VSs and AAVSs; schedule the AVCATT-A and LCTs; schedule the UH-1H Flight Simulators in use for training; schedule the current simulators (UH-60 SFTS, CH-47 SFTS, CAVSIM Facility training devices) in use for training;

KPP I-2	A sufficient number of AAVSs must be provided to train approximately 1150 FSXXI Phase II Advanced Track, 727 AQC, 314 MTP Course, 285 IPC, 110 MOI Course, and 20 Spanish-IRTC students; to support approximately 71 collective training exercises for PME courses, pre-deployment ATXs, and AC/RC units; and to support individual/crew sustainment training for AC/RC aviators annually IAW the applicable government defined training schedules, student flows, and regulatory training requirements (ATMs, AR 95-1, AR 350-1) with the capability to accommodate increased (up to a ten percent surge) student loads, collective training exercises, and individual/crew sustainment training if necessary based on mobilization or other training requirements. (See the glossary for further definition of collective training exercises and AC/RC individual/crew sustainment training requirements.)
KPP I-3	Each TH-67 VS must train two students simultaneously and must have sufficient functionality and fidelity (including motion cues) and visual system (including interoperable, geo-specific terrain databases), C4ISR, and training environment capabilities as required to train to standard the individual/crew tasks identified in Table 4.1.1.1.3 with no negative habit transfer to the aircraft. Functionality and fidelity must include high fidelity flight models and flight control capabilities.
KPP I-4	The AAVSs must include aircraft configurations for the AH-64D, UH-60A, UH-60L, CH-47D, and OH-58D aircraft.
KPP I-5	Each advanced aircraft virtual simulator must train two students simultaneously and must have sufficient functionality and fidelity (including motion cues) and visual system (including interoperable, geo-specific terrain databases), C4ISR, and training environment capabilities as required to train to standard the individual/crew tasks identified in Table 4.1.1.1.5.1 and collective tasks identified in Table 4.1.1.1.5.2 with no negative habit transfer to the aircraft. Functionality and fidelity must include high fidelity flight models and flight control capabilities.
KPP I-6	A training support capability must be provided to schedule, manage, operate, maintain, and upgrade the TH-67 VSs and AAVSs; schedule the AVCATT-A and LCTs; schedule the UH-1H Flight Simulators in use for training; schedule the current simulators (UH-60 SFTS, CH-47 SFTS, CAVSIM Facility training devices) in use for training; integrate and optimize the training and concept exploration and experimentation activities for the USAAVNC simulation facilities; develop TTP; develop training products such as TSPs, CATS, MTPs, ATMs, and training scenario generation tools; and provide technical, tactical, and training development and implementation assistance in support of aviation training.
KPP I-7	The TH-67 VSs must be JTA and HLA compliant and networkable among TH-67 VSs and with other JTA, DIS, and/or HLA compliant virtual simulators (e.g., ETOS) via LAN and WAN. The AAVSs must be JTA, SE Core, and HLA compliant and fair fight interoperable with other JTA, SE Core, DIS, and/or HLA compliant virtual simulators and constructive simulations via LAN and WAN. The AAVSs must be capable of exchanging data messages with current and future C4ISR versions of the ABCS IAW aircraft capabilities and applicable connectivity. ABCSs will include but are not limited to the MCS, ASAS, AMDWS, AFATDS, CSSCS, FCB2 System, TAIS, and mission planning systems. Data communication connectivity must be provided for actual and/or simulated systems, as applicable. Digital data message sets in the AAVS must reflect actual operational/tactical message set content and format.

01-2-6108	Conduct Air Assault Security	X	X		
01-2-6109	Conduct Movement to Contact	X	X		
01-2-7039	Conduct Hasty Assembly Area Displacement	X	X	X	X
01-2-7105	Perform Aerial Passage of Lines	X	X	X	X
01-4-1352	Establish Communications	X	X	X	X

\*4.1.1.1.6 KPP I-6. A training support capability must be provided to schedule, manage, operate, maintain, and upgrade the TH-67 VSs and AAVSs; schedule the AVCATT-A and LCTs; schedule the UH-1H Flight Simulators in use for training; schedule the current simulators (UH-60 SFTS, CH-47 SFTS, CAVSIM Facility training devices) in use for training; integrate and optimize the training and concept exploration and experimentation activities for the USAAVNC simulation facilities; develop TTP; develop training products such as TSPs, CATS, MTPs, ATMs, and training scenario generation tools; and provide technical, tactical, and training development and implementation assistance in support of aviation training.

Rationale: A training support capability is required to alleviate government manpower resource constraints in the areas of training analysis, design, development, and implementation and to more effectively manage institutional simulation training facilities and systems. As the maximum number of military personnel are moved back into units IAW Chief of Staff of the Army guidance, contractor personnel will be essential to the capability to continue to conduct effective training.

\*4.1.1.1.7 KPP I-7. The TH-67 VSs must be JTA and HLA compliant and networkable among TH-67 VSs and with other JTA, DIS, and/or HLA compliant virtual simulators (e.g., ETOS) via LAN and WAN. The AAVSs must be JTA, SE Core, and HLA compliant and fair fight interoperable with other JTA, SE Core, DIS, and/or HLA compliant virtual simulators and constructive simulations via LAN and WAN. The AAVSs must be capable of exchanging data messages with current and future C4ISR versions of the ABCS IAW aircraft capabilities and applicable connectivity. ABCSs will include but are not limited to the MCS, ASAS, AMDWS, AFATDS, CSSCS, FBCB2 System, TAIS, and mission planning systems. Data communication connectivity must be provided for actual and/or simulated systems, as applicable. Digital data message sets in the AAVS must reflect actual operational/tactical message set content and format.

Rationale: The simulators must be JTA and SE Core compliant, must be fair fight interoperable with other simulators and simulations, and must be capable of interfacing with the ABCSs to support the required individual, crew, collective, combined arms, and joint training requirements.

\*4.1.1.1.8 KPP I-8. Concurrency of the TH-67 VSs and AAVSs must be maintained. The initial configuration of the TH-67 VSs must match that of the most current TH-67 aircraft used for training at Fort Rucker, Alabama, six months prior to delivery of the TH-

facilities and will take all necessary precautions to assure the safety of soldiers while en route to and from the facilities and during training at the facilities. The contractor will be responsible for all costs associated with off post facilities including acquisition of land or buildings, building modification and/or construction, utilities, building maintenance, grounds maintenance, janitorial services, telephone service, internet connections, and administrative and simulation LAN and WAN capabilities and connections. Simulation LAN and WAN capabilities and connections must support classified and unclassified operations, training, and interoperability, as required.

The contractor's technical solution and associated facility plan will impact installation utility demand loads. It will be necessary for the government and the contractor to jointly identify and resolve issues concerning installation utility capacities versus contractor-determined demand loads once the technical solution and facility plan are identified.

5.8 Transportation and Basing. The FSXXI Simulation systems will not require transportation once installed in the training facilities. Transportation of the systems to the training facilities will be the responsibility of the service contractor.

5.9 Geospatial Information and Services. The FSXXI Simulation service contractor will be responsible for providing the terrain databases and associated digital and paper maps as required to support the training requirements defined in paragraph 4.

5.10 Natural Environmental Support. Not applicable.

6. Force Structure. The FSXXI Simulation capability is a service requirement. The service, including training devices, will be provided to the USAAVNC, Fort Rucker, Alabama, starting no later than 15 months after contract award.

7. Schedule.

7.1 Initial Operational Capability (IOC).

7.1.1 Block I.

IOC for the TH-67 VSs and the associated training support capability is no later than 15 months after contract award. IOC is defined as successful completion of RFT accreditation of at least 30 percent, but no less than eight, of the TH-67 VSs. UH-1H Flight Simulators can continue to be used as necessary to meet the training requirement until all Phase I Primary Core, RWIFEC, and Advanced IFR training is transitioned to the TH-67 VSs. All Phase I Primary Core, RWIFEC, and Advanced IFR simulation training must be transitioned to the TH-67 VSs no later than full operational capability (FOC). The training support capability at IOC must be as required to schedule, manage, operate, maintain, and upgrade the TH-67 VSs and schedule the UH-1H Flight Simulators still in use for training.

IOC for the AAVSs and the associated training support capability is defined in two stages. The first IOC is defined as successful completion of RFT accreditation of at least five UH-60A/L AAVSs and one CH-47D AAVS by no later than 18 months after contract award. The second IOC must occur as required to support the full-up training requirement for the FSXXI Phase II Advanced Track, AQC, MTP Course, IPC, MOI Course, and IRTC students that begin training in FY06. The second IOC is defined as successful completion of RFT accreditation of all AAVSs required to support the individual/crew institutional training requirement identified in paragraph 4, KPP I-2 (does not include collective training or AC/RC individual/crew sustainment training requirements). Current simulators (UH-60 SFTS, CH-47 SFTS, and CAVSIM Facility training devices) can continue to be used as necessary to meet the advanced aircraft training requirement until all applicable training is transitioned to the AAVSs. All applicable training must be transitioned to the AAVSs no later than FOC. The AVCATT-A and LCTs will continue to be used for training before, during, and after transition to the AAVSs. The training support capability at the first and second IOCs must be as required to schedule, manage, operate, maintain, and upgrade the AAVSs as they are delivered; schedule the current simulators (LCT, UH-60 SFTS, CH-47 SFTS, CAVSIM Facility training devices, and AVCATT-A); integrate and optimize the training and concept exploration and experimentation activities for the USAAVNC simulation facilities; develop TTP; develop training products such as TSPs, CATS, MTPs, ATMs, and training scenario generation tools; and provide technical, tactical, and training development and implementation assistance in support of aviation training.

7.1.2 Block II. The IOC date for the Block II RAH-66 advanced aircraft virtual simulator must coincide with delivery of the actual aircraft to USAAVNC for flight training, and quantities of simulators must support the applicable student loads at that time.

## 7.2 Full Operational Capability (FOC).

### 7.2.1 Block I.

FOC for the TH-67 VSs and the associated training support capability must occur as required to support full implementation of FSXXI for all students that begin flight school in FY06 and to support the RWIFEC and Advanced IFR training. FOC is defined as successful completion of RFT accreditation of all TH-67 VSs required to support the full-up FSXXI Phase I Primary Core, RWIFEC, and Advanced IFR training requirements identified in paragraph 4, KPP I-1, and the associated training support capability required to schedule, manage, operate, maintain, and upgrade the total number of TH-67 VSs and schedule two UH-1H Flight Simulators. All Phase I Primary Core, RWIFEC, and Advanced IFR simulation training must be transitioned to the TH-67 VSs by FOC.

FOC for the AAVSs and the associated training support capability is no later than 57 months after contract award. All AAVSs required to support the full-up training requirements identified in paragraph 4, KPP I-2, must be delivered with the associated

SYSTEM TRAINING PLAN (STRAP)  
FOR  
FLIGHT SCHOOL XXI (FSXXI) SIMULATION

2 June 2003

1. System Description. The FSXXI Simulation capability is a long-term contractor provided service consisting of three parts: TH-67 virtual simulators (VS), advanced aircraft virtual simulators (AAVS), and a training support capability.

a. The TH-67 VSs will support FSXXI Phase I Primary Core, Rotary Wing Instrument Flight Examiner Course (RWIFEC), and Advanced Instrument Flight Rules (IFR) training. The number of TH-67 VSs will be as required to meet the Phase I Primary Core, RWIFEC, and Advanced IFR training requirements defined in paragraph 4 of the FSXXI Simulation Services Requirements Document (SSRD).

b. The AAVSs will support training in the FSXXI Phase II Advanced Track, Aircraft Qualification Courses (AQC), Professional Military Education (PME) courses, Maintenance Test Pilot (MTP) Courses, Instructor Pilot Courses (IPC), Method of Instruction (MOI) Courses, Spanish-Instrument Refresher Training Course (IRTC), pre-deployment Aviation Training Exercises (ATX), and Active Component/Reserve Component (AC/RC) sustainment training. The Block I (threshold) AAVSs will include aircraft configurations for the AH-64D, UH-60A/L, CH-47D, and OH-58D aircraft. Concurrency upgrades for the Block I aircraft configurations will include upgrades from the CH-47D to the CH-47F and from the UH-60A/L to the UH-60M. The Block II (objective) AAVSs may include configurations for other aircraft in the future including the RAH-66 aircraft. Integration of additional aircraft configurations will be based on development and fielding schedules of the actual aircraft. The number of AAVSs will be as required to meet the Phase II Advanced Track, AQC, PME, MTP, IPC, MOI, Spanish-IRTC, ATX, and AC/RC sustainment training requirements defined in paragraph 4 of the FSXXI SSRD.

c. Current simulators (UH-60 Synthetic Flight Training Systems (SFTS), CH-47 SFTS, UH-1 Flight Simulators, and Combat Aviation Simulation (CAVSIM) Facility training devices) will continue to be used as necessary to meet the training requirement until all applicable training is transitioned to the TH-67 VSs and AAVSs. As the FSXXI simulators become operational at the U. S. Army Aviation Center (USAAVNC), the current simulators will move to AC/RC locations to support unit training, made available for foreign military sales, or otherwise disposed of. The Aviation Combined Arms Tactical Trainer-Aviation Reconfigurable Manned Simulator (AVCATT-A), Longbow Crew Trainers (LCT), and two UH-1H Flight Simulators will continue to support training at USAAVNC before, during, and after transition to the TH-67 VSs and AAVSs.

d. A training support capability will be provided to schedule, manage, operate, maintain, and upgrade the TH-67 VSs and AAVSs; schedule the AVCATT-A and LCTs; schedule the UH-1H Flight Simulators in use for training; schedule the

schedule the UH-1H Flight Simulators in use for training; schedule the current simulators (UH-60 SFTS, CH-47 SFTS, CAVSIM Facility training devices) in use for training; integrate and optimize the training and concept exploration and experimentation activities for the USAAVNC simulation facilities; develop tactics, techniques, and procedures (TTP); develop training products such as training support packages (TSP), combined arms training strategies (CATS), mission training plans (MTP), aircrew training manuals (ATM), and training scenario generation tools; and provide technical, tactical, and training development and implementation assistance in support of aviation training.

## **2. Peacetime/Wartime.**

a. The number of training hours per day, the number of training days per week, and the number of training days and weeks per year for the TH-67 VSs and AAVSs will be as required to support the training requirement defined in paragraph 4 and the glossary of the FSXXI SSRD.

b. The standard training week for the TH-67 VSs and AAVSs will be five days per week, Monday through Friday (excluding federal holidays), 52 weeks per year. The standard training day will be 15 simulator flight hours per day for 50 weeks per year and eight simulator flight hours per day for two weeks per year. The training day will begin no earlier than 0600.

c. Approximately six weekends per year, Saturday through Sunday, may be required for the TH-67 VSs. The training day for weekends will be ten simulator flight hours per day.

d. Approximately 20 weekends per year, Saturday through Sunday, may be required for some combination of the AAVSs to support individual/crew and collective training. The training day for weekends will be ten simulator flight hours per day.

e. The training day, week, and weekend requirements defined in paragraphs 2.b through 2.d above should be used for planning purposes, but the schedule must remain flexible enough to meet the training requirement, as necessary.

**3. Environmental Conditions.** The TH-67 VSs and AAVSs will operate within climate controlled training facilities.