

BACKGROUND PAPER

On AIR FORCE CIVIL ENGINEER SUPPORT AGENCY (AFCESA)

AF QUALIFICATION TRAINING PACKAGES (AFQTPs)

And READINESS TRAINING PACKAGES (RTPs)

PURPOSE

- The purpose of AFQTP program is to standardize OJT training received in the field on core and critical STS tasks (mostly contingency tasks) as identified in the CAREER FIELD EDUCATION AND TRAINING PLAN (CFETP). AFQTPs enable trainers to redeem time back from the training process by assigning the CD-ROM to the trainee to complete before receiving hands on training. The trainee better retains the information presented in a multi-media program. He/she can see video clips of the equipment in action. They can also be given realistic, typical scenarios and troubleshooting techniques.

THE PROCESS

- AFQTPs: Most AFQTPs consists of several lessons. Each lesson contains review questions. Some programs have the ability to print out a certificate of completion at the end of the course. Each AFQTP (CD-ROM) may be run off a LAN system as a client/server application, loaded as a “stand-alone” program or in the case of newer revised programs as a web-based course. Student login/password is only required to access course book marks/completion information.

- RTPs: RTPs are essentially the same as AFQTPs from a technical standpoint, with a couple of major differences in content presentation. The first difference is the AFQTP targets the individual in training; the RTP targets the group, usually in a classroom environment. The second difference is that the information contained in the AFQTP is more directed to the individual contingency responsibilities of the specific AFSC while the RTPs are geared more towards the general contingency responsibilities of the unit. There will be more AFQTPs, and RTP CD-ROMs developed as funding becomes available.

TECHNICAL

- Authoring programs or languages used in development: Icon Author, Macromedia Director, Macromedia Authorware, Installshield Developer, Microsoft C++, Borland Delphi

The Object Oriented higher order language of C++ and the Borland Delphi 6 RAD (Rapid Application Development) software was used to build the ISAPI DLL files and the Client/Server programs, Installshield being used to construct the individual installation programs. The construction of the Computer-based Training products was performed using industry standard “commercial off-the-shelf” (COTS) multimedia authoring systems.

Each AFQTP (CD-ROM) may be run off a LAN system as a client/server application having the primary application files and media residing on the server, and having a small run-time client application that establishes communication through standard TCP connection. It may be installed to the hard drive as a stand-alone application with all programs and media installed to the local machine, or it can be run as a minimum install, installing just the run-time executables, all other media and files pulled from the CD itself.

Some of the recent updates or new programs (identified on included list with an asterisk) also include a web install option which would install the product on a standard Microsoft IIS web

server and would use a standard ISAPI DLL or CGI based program to write student registration and bookmark data to a non-proprietary ASCII text file. There is no classification to the courses per say, but is determined by content and distribution statements of the Technical Orders or regulations cited in the development of course materials. Currently, the highest security designation would be "For Official Use Only" (FOUO).

Student data would not necessarily be considered privacy act information, for only the student name is used without any other rank or personal information stored other than that individuals password to access the course material. In all instances, it uses the networks or local systems authentication to establish access to course material. LAN installs are normally within a secured enclave, and at no time would the application be attempting to transfer data or establish communication outside the enclave. By default, the server application will use port 3232, unless otherwise specified at installation, when communicating with client program.

The web-based install would follow the same security/authentication as that established for DoD publicly accessible web servers within a DMZ environment, the IASPI or CGI web server installs are simplistic in nature, only having the ability to write to a text file within the directory established for the CGI app or dll, no other RDBMS such as Oracle or MS SQL server is required or used.

The web installs require the client accessing through normal HTTP or SSL connection to have the Macromedia Authorware player installed. Courses are scheduled to be converted to Sharable Content Object Reference Model (SCORM) compatible web-based courses accessible through a AF web-based Learning Management System (LMS) or stand-alone with a SCORM course player distributed as part of the LMS software – at that time, courses would then fall under the CTO/CoN of the LMS itself.

The distributions include

- Standard IconAuthor or Authorware compiled courseware files
- Any "run-time" executables/libraries required by the authoring program to run course files.
- The Contractor apps which includes an Authorware U32 (User coded add-on or "Extra") client and a server app for LAN installs or a CGI executable or ISAPI.dll for processing requests to retrieve or write student data to ASCII text files.
- Video files (format: AVI, WMV)
- Audio files (format: WAV, SWA)

- Client PC requirements: Pentium 450 minimum, RAM: 128 MB suggested, 64 MB minimum, SVGA Graphics Adapter with 2 MB video RAM or higher, 16 bit true color 800X600 resolution SVGA Monitor (1024x768 or higher recommended), Sound Card:

SOFTWARE

See attached list. Items identified with an Asterisk have the web server installation option included, and should fall under the same CoN.

Updated listing of AFQTP and RTP CD/ROM products available and/or under development

| | Title | Status |
|----|--|-----------|
| 1 | Global Positioning System | Completed |
| 2 | Water Testing | Completed |
| 3 | Rapid Runway Repair | Completed |
| 4 | Rigging-Ladders and Scaffolds | Completed |
| 5 | General Purpose Shelter | Completed |
| 6 | Harvest Falcon Waste Water System | Completed |
| 7 | Boilers: Combustion, Water & Steam | Completed |
| 8 | Bare Base Planning | Completed |
| 9 | Armored Personnel Carrier | Completed |
| 10 | Automatic Chemical Agent Detector (M-90) | Completed |
| 11 | Small Shelter System (SSS) | Completed |
| 12 | Small Shelter System (SSS) ECU | Completed |
| 13 | Harvest Falcon Water Distribution System | Completed |
| 14 | Civil Engineer Organization & Career Field Structure (3 level Common Core CBI) | Completed |
| 15 | Crater Profile Measurement | Completed |
| 16 | Rapid Utility Repair Kit (RURK) | Completed |
| 17 | Manual and Powered Pest Management Equipment | Completed |
| 18 | Field Deployable Latrine | Completed |
| 19 | NBC Reports, Plotting and Hazard Assessment | Completed |
| 20 | NBC Threat Analysis and Protective Measures | Completed |
| 21 | Bare Base M 149 Trailer Mounted Water Chiller | Completed |
| 22 | Underground Electrical Distribution Systems | Completed |
| 23 | Lightweight Fairlead Beam | Completed |
| 24 | 5-Level General Contingency Responsibilities | Completed |
| 25 | Field Deployable Environmental Control Unit (FDECU) | Completed |
| 26 | All Purpose Remote Transport System (ARTS) | Completed |
| 27 | Reverse Osmosis Water Purification Sys | Completed |
| 28 | Portable Shower Unit (M1958) & (PBU 100) | Completed |
| 29 | Operation and Maintenance of Pest Maintenance ULV Equipment | Completed |
| 30 | Harvest Eagle Water Distribution System | Completed |
| 31 | Shower and Shave Unit | Completed |
| 32 | Confined Space Rescue | Completed |
| 33 | A-10 Aircraft | Completed |
| 34 | C-141 Aircraft | Completed |
| 35 | C-9 Aircraft | Completed |
| 36 | B-52G/H Aircraft | Completed |
| 37 | Minimum Operating Strip Selection | Completed |
| 38 | 3-Level General Contingency Responsibilities CBI | Completed |
| 39 | M-272 Water Testing Kit, Chemical Agents | Completed |
| 40 | Revetments v 2.0 | Completed |
| 41 | Contingency Airfield Marking Procedures | Complete |
| 42 | Medium Shelter System (CAMSS) | Completed |
| 43 | Remote Area Lighting System (RALS) | Completed |
| 44 | Airfield Criteria Course for Civil Engineers, Airfield Managers, & Wing Safety v 2.0 | Completed |
| 45 | USAF CONUS Response Task Force | Completed |
| 46 | Repair Water/Wastewater Piping Systems | Completed |
| 47 | Confined Space I | Completed |
| 48 | TO 00 105E-9 Emergency Procedures | Completed |
| 49 | T-38/F-5 Aircraft Training | Completed |
| 50 | P-23 Fire Vehicle Training | Completed |

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| 51 | KC/RC-135 Aircraft Training | Completed |
| 52 | KC-10/DC-10/MD-11 Aircraft Training | Completed |
| 53 | F-18 Aircraft Training | Completed |
| 54 | F-16 Aircraft Training | Completed |
| 55 | F-15 Aircraft Training | Completed |
| 56 | F-15 Aircraft EOD | Completed |
| 57 | Hazardous Materials Incident Commander Emergency Response Training | Completed |
| 58 | CRAF 747 Aircraft Training | Completed |
| 59 | B-1 Aircraft EOD | Completed |
| 60 | C-5 Aircraft Training | Completed |
| 61 | C-17 Aircraft Training | Completed |
| 62 | C-130 Aircraft Training | Completed |
| 63 | B-1B Aircraft Training | Completed |
| 64 | Minimum Operating Strip Layout | Completed |
| 65 | Hazardous Materials Technician Emergency Response Training | Completed |
| 66 | Hazardous Materials Operations Emergency Response Training | Completed |
| 67 | F-117 Aircraft Training | Completed |
| 68 | Readiness Flight Orientation | Completed |
| 69 | PRIME BEEF Home Station Training Volume 3 | Completed |
| 70 | PRIME BEEF Home Station Training Volume 2 | Completed |
| 71 | PRIME BEEF Home Station Training Volume 1 | Completed |
| 72 | Nuclear, Biological, Chemical, and Conventional (NBCC) Defense Operations and Standards | Completed |
| 73 | Air Force Contract Augmentation Program (AFCAP) | Completed |
| 74 | Air Force Civil Engineer Industrial Water Treatment Orientation Program | Completed |
| 75 | A-10 Aircraft EOD | Completed |
| 76 | M-90 Chemical Agent Detector | Completed |
| 77 | AC-130 Aircraft EOD | Completed |
| 78 | Chemical Agent Monitor and Chemical Agent Monitor Training Simulator | Completed |
| 79 | Bath Unit and Shower Facility | Completed |
| 80 | Bare Base Planning and Layout | Completed |
| 81 | Guide for Civil Engineer Service Contracts | Completed |
| 82 | F-22 Aircraft Training EOD | Completed |
| 83 | F-16 Aircraft EOD | Completed |
| 84 | B-52 Aircraft EOD | Completed |
| 85 | 737 Aircraft Training | Completed |
| 86 | Trailer Mounted Water Chiller | Completed |
| 87 | Hazardous Materials Awareness Emergency Response Training | Completed |
| 88 | Harvest Falcon Electrical Distribution System | Completed |
| 89 | Governor Systems | Completed |
| 90 | AFS Specific Publications | Completed |
| 91 | Power Production Test Equipment | Completed |
| 92 | Automatic Transfer Panels | Completed |
| 93 | Preway Space Heater | Completed |
| 94 | Engine Start Systems | Completed |
| 95 | Immersion Heater | Completed |
| 96 | Bare Base Air Conditioner (A/E 32C-39) | Completed |
| 97 | HVAC Electrical Troubleshooting and Repair | Completed |
| 98 | 750 Kilowatt Generator | Completed |
| 99 | Grounding Fundamentals | Completed |
| 100 | Lubricating Systems | Completed |
| 101 | Fuel Systems | Completed |
| 102 | Cooling Systems | Completed |

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| 103 | 150 CF Refrigerator | Completed |
| 104 | Emergency Response to Terrorism Basic Concepts | Completed |
| 105 | First Aid/First Responder and Cardiopulmonary Resuscitation (CPR) | Completed |
| 106 | Fire Service Instructor I Certification Course | Completed |
| 107 | Fire Officer I Certification Course | Completed |
| 108 | Fire Inspector I Certification Course | Completed |
| 109 | Fire Department Driver/Operator Pumping Apparatus | Completed |
| 110 | Emergency Response to Terrorism for Emergency Responders | Completed |
| 111 | Field Boilers (M-80) | Completed |
| 112 | Emergency Response to Terrorism Self-Study | Completed |
| 113 | Emergency Medical Technician - Basic | Completed |
| 114 | Apparatus Driver/Operator Aircraft Rescue and Fire Fighting | Completed |
| 115 | Harvest Eagle Electrical Distribution System | Completed |
| 116 | Temper Tent | Completed |
| 117 | *Mobile Aircraft Arresting System (MAAS) 2.0 | Completed (Updated) |
| 118 | TDA-99M Respirator Function Tester | Completed (New) |
| 119 | Exercise Evaluation Team Readiness Training Course | Completed (New) |
| 120 | *Contingency Fuel Recovery System (CFRS) | Completed (New) |
| 121 | *Contingency Airfield Marking - Paint Striper | Completed (New) |
| 122 | *PRIME BEEF Home Station Training Volume 4 | Completed (New) |
| 123 | *PRIME BEEF Home Station Training Volume 5 | Completed (New) |
| 124 | *Counter-Chemical Warfare Concept of Operations Volume 1 of 2 | Completed (New) |
| 125 | *Counter-Chemical Warfare Concept of Operations Volume 2 of 2 | Completed (New) |
| 126 | *MAJCOM Involvement for WMD Incidents | Completed (New) |
| 127 | *Counter-Chemical Warfare CONOPS For USAF Functional Organizations Volume 1 of 3 | Completed (New) |
| 128 | *Counter-Chemical Warfare CONOPS For USAF Functional Organizations Volume 2 of 3 | Completed (New) |
| 129 | *Counter-Chemical Warfare CONOPS For USAF Functional Organizations Volume 3 of 3 | Completed (New) |
| 130 | *Disaster Control Group Course | Completed (New) |
| 131 | *Readiness Support Team Course | Completed (New) |
| 132 | *UXO Safety Training Program (Environmental) | Completed (New) |
| 133 | Emergency Airfield Lighting System (EALS) (Revision) v 2.0 | Under Development |
| 134 | Contingency Airfield Marking and Layout Procedures | Under Development |
| 135 | GPS 5700 Total Station | Under Development |
| 136 | ADR 300 Refrigeration Unit | Proposed Development |
| 137 | Explosive Ordnance Reconnaissance Training (Base) | Proposed Development |
| 138 | Harvest Falcon Electrical Distribution System (Revised) | Proposed Development |
| 139 | Harvest Eagle Electrical Distribution System (Revised) | Proposed Development |
| 140 | Gas/Diesel Engine Maintenance | Proposed Development |
| 141 | Generator Set Operations | Proposed Development |
| 142 | Alternator, Exciter, & Electric Motor | Proposed Development |
| 143 | Troubleshoot Battery Chargers | Proposed Development |
| 144 | Grounding Fundamentals (Revised) | Proposed Development |
| 145 | 750 Kilowatt Generator (Revised) | Proposed Development |
| 146 | Lightweight Fairlead Beam (Revised) | Proposed Development |
| 147 | Engine Start Systems (Revised) | Proposed Development |
| 148 | Cooling Systems (Revised) | Proposed Development |
| 149 | AFS Specific Publications (Revised) | Proposed Development |
| 150 | Power Production Test Equipment (Revised) | Proposed Development |
| 151 | Automatic Transfer Panels (Revised) | Proposed Development |
| 152 | Fuel Systems (Revised) | Proposed Development |
| 153 | Governor Systems (Revised) | Proposed Development |
| 154 | Lubricating Systems (Revised) | Proposed Development |

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| 155 | Highreach/Line Truck Operation | Proposed Development |
| 156 | Motors and Controls | Proposed Development |
| 157 | Field Boiler (Revised) | Proposed Development |
| 158 | HVAC Electrical Troubleshooting and Repair (Revised) | Proposed Development |
| 159 | 150 Cubic Foot Refrigerator (Revised) | Proposed Development |
| 160 | Bare Base Air Conditioner –39 (Revised) | Proposed Development |
| 161 | Airfield Damage Repair | Proposed Development |
| 162 | CE Airfield Snow & Ice Removal Procedures | Proposed Development |
| 163 | Crane Operations | Proposed Development |
| 164 | Paved Surfaces | Proposed Development |
| 165 | TEMPER Tent (Revised) | Proposed Development |
| 166 | Placing Concrete | Proposed Development |
| 167 | Layout Concrete Structures | Proposed Development |
| 168 | Reverse Osmosis Water Purification Unit (ROWPU) Operation (Revised) | Proposed Development |
| 169 | Install, Repair, Replace Plumbing Systems | Proposed Development |
| 170 | Mobile Aircraft Arresting System (MAAS) Alignment Procedures | Proposed Development |
| 171 | Global Positioning System | Proposed Development |
| 172 | Survival Recovery Center (SRC) & Unit Control Center Procedures | Proposed Development |
| 173 | Scope Shield Radio Operation | Proposed Development |
| 174 | High Energy Access & Disablement Device (HEADD) | Proposed Development |
| 175 | Explosive Entry Techniques | Proposed Development |
| 176 | General Contingency Responsibilities – 5 Level (Revised) | Proposed Development |
| 177 | General Contingency Responsibilities – 3 Level (Revised) | Proposed Development |
| 178 | Civil Engineer Organizational & Career Field Structure Course (Revised) | Proposed Development |

* Web player