

# **RAPID ACTION CHANGE (RAC) TEST REPORT**

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## 1. PURPOSE

This technical analysis report describes the Rapid Action Change (RAC) Implementation Test conducted from 7 January 1998 through 13 February 1998 by the Product Data Systems Modernization Program Office. The primary purpose of this effort was to demonstrate the capability of using the RAC process to provide emergency or urgent updates to page based TOs. This process involved creating, distributing, and posting RAC Technical Order (TO) changes at the wholesale (ALC) and retail (TODO) levels. Additionally, the test was designed to gather information regarding capabilities and limitations on the existing infrastructure, IPDF sustainment tools, and to document practices and procedures to provide the TO community with the necessary guidance required to accomplish the RAC process. Lastly, the test was conducted to identify what worked, to identify weak areas in the process and to recommend improvements.

## 2. SCOPE

The RAC Implementation Test demonstrated potential solutions for updating Air Force TOs using Indexed Portable Document Format (IPDF) sustainment tools to satisfy IPDF and paper TO users. Commercial-off-the-shelf (COTS) tools, namely Adobe Acrobat™ Exchange and Microsoft Word, were used to create a PDF RAC file and Digital Technical Order (DiTO) Change Incorporation Software and Acrobat™ Exchange were used to merge the PDF RAC file into the baseline IPDF TO. The test required involvement from Technical Order Managers, Technical Content Managers, Editors, and System Administrators at the wholesale level, and Technical Order Distribution Offices (TODOs) at the retail level. The test focused on the capability to generate electronic RAC packages at the wholesale level, update TOs at the wholesale and retail levels, and distribute updated TOs and change packages to the retail level.

**Test Environment.** The test was conducted in a real world environment using real data and participants familiar with the TO change process. Live data was not used. Live data is defined as published data available for use by the Air Force. Real data is defined as published data from actual TOs but NOT available for use. Real data was used instead of live data to preclude fielding a “simulated” update impacting the use and configuration of the actual TO. In addition, the wholesale level was constrained by the test plan to use an IPDF TO file as the source file to create the RAC as this was deemed the most difficult situation. In the absence of this constraint and if available, a native source file could be used to streamline the process to create the RAC. The test was conducted in a digital environment utilizing the Internet for data transfer. Data security was not an issue because the test TOs selected were marked Distribution Statement A and as such, were available for unlimited distribution.

**Approach.** The approach was formulated to demonstrate and test the RAC process as a feasible method to meet the time requirements for distributing emergency and urgent changes to TOs in the field. These time requirements are stipulated in the memorandum, Interim Practices and Procedures for Use of Rapid Action Changes (RAC) to Update

Indexed Adobe™ Portable Document Format (IPDF) Technical Order (TO) Files and Associated Paper Copies of Affected TOs. The PDSM PO developed comprehensive test procedures for the wholesale and retail segments of each scenario to guide test participants through the RAC process and to provide a documentation trail for the test.

**Scenarios.** The RAC Implementation Test was conducted using four scenarios. Each test scenario was initiated by sending a simulated publication change request message via E-mail to the appropriate contact point at the ALC. The scenarios were designed to test the different distribution and change methods which could be implemented. The distribution methods included distribution by E-mail (push) and FTP (pull). The change options included first, having the wholesale level create the change package and distribute it to the retail level for incorporation, and second, having the wholesale level create the change package, incorporate it into the TO, and then make the updated TO and change package available to the retail level. The scenarios, test TO, and time frames for the test were:

Scenario 1	FTP RAC	TO 00-5-18	Jan 98
Scenario 2	E-Mail RAC	TO 00-5-18	Jan 98
Scenario 3	FTP Merged TO & RAC	TO 1-1-691	Feb 98
Scenario 4	E-Mail Merged TO & RAC	TO 1-1-691	Feb 98

**Assumptions.** Test procedures were developed for each of four scenarios based on the following assumptions:

1. Test participants were familiar with the Windows environment.
2. TO Managers had access to editors who were familiar with editing tools for desktop publishing
3. TO Managers had access to an FTP server that could be utilized to host TO files
4. TO Managers and TODOs were familiar with FTP procedures and had an FTP utility at their disposal
5. TO Managers had access to a Systems Administrator that could manage the FTP site.

**Minimum Requirements.** Minimum hardware requirements to support the test included a 486/33 IBM compatible PC with at least 8 MB of RAM, modem or LAN access, laser or ink-jet printer, and a copier. Minimum software requirements included MS Windows 3.x or higher, Adobe Acrobat™ Exchange 3.0 (individual cost approximately \$175 a copy), Digital TO (DiTO) Change Management Software 2.0 (TO 00-5-1-101) developed by the PDSM Program Office, an E-mail system and FTP client software application. Use of Windows 95 or higher was recommended.

**Exit Criteria.** The following exit criteria were established to evaluate the test.

1. (General) Create and distribute a RAC as a PDF change package file (or merged into the baseline IPDF TO file) to provide information to end users to satisfy a *simulated* emergency or urgent condition.
2. (General) Interim practices/procedures for RACs properly address the RAC process for wholesale and retail level customers.
3. (Wholesale Level) TO Manager/TCM successfully obtains a RAC number, produces a RAC, sends RAC notification by *simulated* message using E-mail, and distributes the RAC via E-mail or places the RAC on an FTP site within 48 hours (the proposed timeline for an EMERGENCY RAC).
4. (Retail Level) Duty Officer receives *simulated* RAC notification message within two hours.
- 5A. (Retail Level) TODO obtains RAC and uses DiTO to merge the RAC into the baseline IPDF TO using the provided Quick Start Instructions.
- 5B. (Retail Level) TODO receives merged IPDF TO and RAC.
6. (Retail Level) TODO uses RAC and *simulates* distribution of RAC to TO Distribution Accounts (TODA) with paper and digital TO requirements within 24 hours (the proposed timeline for an URGENT RAC).

**Participants.** The PDSM Program Office solicited help on the wholesale level from Warner Robins Air Logistics Center (WR-ALC) and Oklahoma City Air Logistics Center (OC-ALC) to support the test. WR-ALC and OC-ALC agreed to support the test and identified the test TOs as well as Technical Order Managers, Technical Content Managers, Editors, and System Administrators. There were four retail level participants comprised of three Technical Order Distribution Offices (TODOs) located at or near Wright-Patterson AFB and one at HQ ACC.

### 3. TEST RESULTS

**Overview.** The results of the RAC Test indicated the RAC concept, process and tools do work. In all four scenarios, a “simulated” RAC was successfully produced and digitally merged either before or after distribution to base level TODOs producing an updated IPDF TO. However, as expected, the process was not entirely trouble free. The following paragraphs cite specific results, problems and tradeoffs between the different scenarios.

**Scenario 1 (FTP RAC Only) and Scenario 2 (E-mail RAC Only) Results.** Scenarios 1 and 2 were successfully completed within the allotted timelines with minor complications encountered along the way. In both scenarios, “simulated” RACs were successfully produced and distributed to base level TODOs who, in turn, were able to merge the RAC

creating an updated TO and “simulate” distribution of the RAC to both digital (IPDF) and paper TO users.

**Scenario 1 Specifics.** Scenario 1 consisted of OC-ALC creating a “simulated” RAC for 00-5-18 and then placing the RAC file on an FTP site. Although OC-ALC did experience difficulty in creating the RAC, in the end, they did successfully create the RAC (see ALC Comments for specific remarks on problems encountered). OC-ALC then sent a RAC notification message via E-mail to the base level TODOs supporting the test notifying them that a “simulated” RAC had been issued for TO 00-5-18. Although standard procedures call for sending the RAC notification message via the AUTODIN message system, E-mail was used to send the RAC notification message in all scenarios of this test. The RAC notification message included the affected TO number and change number of the RAC, the file name of the RAC package, the IP address of the FTP site where the RAC file was located, the User ID and password to access the FTP site, and a point of contact and phone number to call in case of any technical problems. The base level TODOs downloaded the RAC via FTP and then performed two operations. First, the TODOs used the RAC file to print a change package for paper users. A copier was then used to produce a change package suitable for posting to a paper TO. Due to the fact that the RAC pages were 8 1/2 by 11 inch black and white and printable on standard laser printers, this was accomplished without any problems. Second, the TODOs used the DiTO and Acrobat™ Exchange software tools to merge the RAC into the baseline TO and produced an updated IPDF TO. The TODOs followed the procedures outlined in the Quick Start Instructions -- a two page instruction guide on how to use DiTO. The Quick Start Instructions were included as an attachment to the test procedures. DiTO was successfully used by each TODO supporting the test to produce an updated IPDF TO.

**Scenario 2 Specifics.** Scenario 2 consisted of OC-ALC first creating a “simulated” RAC for TO 00-5-18. Then, DiTO was used to create an .icp (intelligent change package) file that was E-mailed along with the RAC file to base level TODOs. As in scenario 1, the base level TODOs performed two operations to support paper and digital users. First, the TODOs used the RAC file to print and a copier to produce a change package for paper users. As in scenario 1, the RAC pages were 8 1/2 by 11 inch black and white so producing the paper change package was again accomplished without any problems. Second, the TODOs used the DiTO and Acrobat™ Exchange software tools to merge the RAC into the baseline TO using the .icp and RAC package files. The Quick Start Instructions that were included as an attachment to the test procedures had been modified so the TODOs only had to use the Incorporate ICP function of DiTO to merge the RAC file into the baseline file. This relieved the TODOs of having to use the MakeICP function of DiTO utilized during scenario 1 to produce the .icp file thus, streamlining the actual update process. The TODOs felt this scenario was much easier than when they had to create the .icp file themselves as in scenario 1.

**Scenario 3 (FTP Merged IPDF TO and RAC) and Scenario 4 (E-mail Merged IPDF TO and RAC) Results.** Scenarios 3 and 4 were completed within the allotted timelines although complications were encountered along the way. In both scenarios, “simulated”

RACs were successfully produced and distributed to base level TODOs. Scenarios 3 and 4 included two color pages and two foldout pages in the RAC to examine the impact of these types of pages on the RAC process. The foldout pages were 16.5 by 11 inches and 32 by 11 inches. Whereas the wholesale level was able to produce the RAC package containing color pages and foldouts, problems were encountered at the retail level printing these pages due to inadequate printers. Digital users were able to receive the color and foldout pages in the merged IPDF TO. These scenarios again emphasized the need for training and how important it was to be familiar with the tools involved in the RAC process. Although WR-ALC had difficulty in creating the RAC, they did so successfully and in fact, reduced their time to create the RAC by over 50% (from 8.5 hours to 4 hours) their second time through.

**Scenario 3 Specifics.** Scenario 3 consisted of WR-ALC creating a “simulated” RAC for TO 1-1-691, merging the RAC to produce an updated TO and then placing the merged TO and the RAC on an FTP site. Unfamiliarity with the tools and procedures caused problems in creating and merging the RAC at the wholesale level during this scenario (see [ALC Comments](#) for specific remarks on problems encountered). However, WR-ALC eventually was able to create the RAC and use the DiTO and Acrobat™ Exchange software tools to merge the RAC into the baseline TO to produce an updated IPDF TO. The merging was accomplished again using the Quick Start Instructions that were attached to the test procedures. WR-ALC then sent a RAC notification message via E-mail to the base level TODOs supporting the test notifying them that a “simulated” RAC had been issued for TO 1-1-691. The RAC notification message included the affected TO number and change number of the RAC, the file names of the merged IPDF TO and the RAC, the IP address of the FTP site where the files were located, the User ID and password required to access the FTP site, and a point of contact and phone number to call in case of any technical problems. The base level TODOs used FTP to download the merged IPDF TO and RAC files. The TODOs then performed two operations. First, the TODOs used the RAC file to print a change package for paper users. Color pages and foldouts were included as part of the RAC file in this scenario and caused problems in supporting paper users because of inadequate printing capability at the base level. Second, the base level TODOs successfully simulated replacing the old 1-1-691 file with the merged 1-1-691 file on their file server to satisfy IPDF accounts.

**Scenario 4 Specifics.** Scenario 4 consisted of WR-ALC creating a “simulated” RAC for TO 1-1-691, merging the RAC to produce an updated IPDF TO file and then distributing the merged TO and RAC to the test TODOs via E-mail. The same changes used in scenario 3 were used again in this scenario to create an apples to apples comparison to investigate the learning curve benefit in producing a RAC. WR-ALC again experienced problems in creating and merging the RAC (see [ALC Comments](#) for specific remarks on problems encountered) but nevertheless, did successfully accomplish the task while reducing their time by over 50% (from 8.5 hours to 4 hours as compared to scenario 3). WR-ALC then sent the RAC notification message via E-mail to the test TODOs notifying them that a “simulated” RAC had been issued for TO 1-1-691. The merged IPDF TO (16MB) and the RAC file (509KB) were included as attachments to the E-mail.

WR-ALC decided to send the E-mail early in the morning to ensure the E-mail was transmitted successfully. WR-ALC commented they had experienced problems E-mailing files of this size during the more active times of the workday. On the retail side, this scenario did create some problems because of the file size of the attachments. One TODO had problems using their E-mail software which corrupted the merged IPDF TO file during extraction. After several attempts using different E-mail software packages, the tester was able to successfully extract the 16MB file. After the TO files were extracted, the TODOs again used the merged IPDF TO to “simulate” satisfying digital accounts and again experienced problems trying to print color and foldout pages without the appropriate printing hardware. Furthermore, color copiers were not available to reproduce color pages so even if color printers had been available, copiers could not have been used to produce the change packages.

### **General Problems Encountered in the Test.**

Receipt of the simulated TO publication change request message was delayed because the E-mail at OC-ALC was down the morning of the test. After the E-mail was received, the next problem encountered was unfamiliarity with using new software tools. Unfamiliarity with the software tools was a recurring problem throughout the test and was most prevalent at the wholesale level in creating the RAC. There was a definite learning curve for some of the test participants, particularly for those who were using the change management software for the first time. Retail level problems consisted of not understanding how to download a file via FTP, not having compatible E-mail systems that would allow extraction of large file attachments, and not having printers that could accommodate color and foldout pages.

**Tradeoffs.** There is not a single perfect solution to field a RAC. Thus, RAC process implementers should evaluate the tradeoffs concerning distribution methods and merging RACs into baseline TO files at the wholesale versus retail level when formulating a sustainment strategy. The paragraphs below highlight the distribution and merging tradeoffs.

**Distribution Tradeoffs.** Distribution of the *RAC Only* via FTP demonstrated a pull methodology and used less pipeline than distributing a merged TO with RAC incorporated. FTP sites had to be set up and accounts/passwords established to accommodate this type of distribution. Distribution of the *RAC Only* via E-mail demonstrated a push method of distribution. Although this worked equally well in distributing the RAC to the test population, this distribution method has some drawbacks if implemented on a large scale (i.e., developing and maintaining E-mail addresses of a constantly changing user community at the retail level). E-mail system compatibility is necessary to transfer RACs via E-mail. E-mail systems capable of sending, receiving and extracting large file attachments from one system to another was an additional limiting factor. However, when the E-mail systems did allow the user to extract a large attachment to a hard drive, this was found to be a quicker means of downloading and

required only a couple of minutes as compared to downloading via FTP which in some cases took almost 3 hours.

**RAC Merging Tradeoffs.** Whereas distributing the *RAC Only* required less pipeline than distributing the merged TO and RAC files, it also placed the responsibility for merging the RAC file into the baseline TO on the base level TODO. Having the wholesale level create and provide the .icp file along with the RAC file was identified as an advantage for RACs merged at the retail level. Under this scenario, the responsibility to produce the .icp file would reside at the Air Logistics Center and not with multiple TODOs. A clear advantage here would be “smaller pockets of expertise” would reside at the ALCs possessing knowledge on how to “fix” the page change operations window should DiTO not completely automate the process. Time permitting, a proficient user of DiTO could also include linking information in the .icp file so after the RAC was digitally posted, the updated baseline TO would be completely linked and any manually inserted links on unchanged pages would be preserved. Distinct disadvantages with merging the RAC at the retail level include cost and training factors. From a cost perspective, Acrobat™ Exchange is not free software and would have to be purchased for the retail level at an approximate cost of \$175 a copy. Also, from a training perspective, base level TODOs would have to be trained on how to use DiTO and Exchange.

#### **4. CONCLUSIONS**

The RAC Test showed the RAC process is feasible to provide emergency or urgent updates for page based TOs. The scope of the RAC Test consisted of testing the capability of creating, distributing and merging a RAC file to support IPDF TO and paper TO users. From this perspective, the test demonstrated that the RAC concept is feasible. However, the test also illustrated this is not a “lights out” operation. Difficulties were encountered in creating and distributing the RAC; however, these difficulties were overcome in all cases culminating with the RAC being successfully created and distributed in all four scenarios. Further, the IPDF sustainment tools did work with varying degrees of success and difficulties experienced at both the retail and wholesale levels. As is the case in using any new tool, the test highlighted a definite need for training.

A major shortcoming of the process for paper users was encountered when the RAC contained color pages and foldouts. This was due to infrastructure limitations. Hardware to print and reproduce RAC files containing color pages and foldouts was not readily available at the base level. We have not been able to ascertain the actual impact of this limitation on the RAC process as it is unknown how many interim operational/safety supplements were issued last year actually affecting color pages and foldouts.

The process to distribute an emergency or urgent update within the timelines identified in the Interim Practices and Procedures for Use of Rapid Action Changes (RAC) to Update Indexed Adobe™ Portable Document Format (IPDF) Technical Order (TO) Files and Associated Paper Copies of Affected TOs memorandum can be met. The test also demonstrated that the practices and procedures for using RACs to distribute emergency

and urgent changes to TOs in the field are viable. Although difficulty was encountered along the way that indicated a definite learning curve was involved, the process did work.

## 5. RECOMMENDATIONS

**Overview.** The RAC process can be implemented provided there is commitment to make the process work. The commitment must come from everyone involved in the TO system from the Single Manager to the end user including TO Manager, Technical Content Manager, Editor, Systems Administrator, MAJCOM, TODOs, and supporting contractor (if applicable). The RAC process can work provided it is properly tailored to a particular environment. Implementers of the RAC process should consider tradeoffs concerning distribution and merging at the wholesale versus retail level when formulating their sustainment strategy. The sustainment strategy should be tailored to best support the particular environment surrounding and supporting TO activity.

**Tailor the Sustainment Strategy** There are several areas that will need to be addressed to make the RAC process work. These areas start with a commitment to make the process work and then tailoring the process to support a particular set of requirements established by the Single Manager and MAJCOM. The tailoring process begins with the Single Manager first modifying contracts to support the RAC process and eliminating supplements from their TOs. Additional areas requiring attention include, but are not limited to, requirements definition, security issues, distribution plan, infrastructure and training. These and related sustainment issues and requirements would typically be addressed in a program annex to the CAFTOP.

**Requirements Definition.** A clear definition of requirements should be established between the Single Manager and TO user community to determine exactly what RACs will be used for. The primary means of update should be accomplished using Block Cycle Updates (BCU) and the use of RACs should be reserved to satisfy only emergency or urgent updates that can't wait until the next BCU release. Additionally, it was illustrated during the RAC Test that lack of color printers at the retail level would not allow the RAC process to support color pages in paper TOs. A point of discussion for the users in requirements definition would be to determine if the RAC process needed to support color pages and if so, would workarounds such as using gray scale and patterns be an acceptable way of handling color with the existing infrastructure limitations?

**Security.** Although the RAC Test used two Distribution Statement A TOs, an important consideration for implementing the RAC process with live data is the protection of that data. AFI 33-129 requires user ID, password and encryption of limited distribution TO data files available via the Internet. See the attached White Paper on Protection of Limited Distribution Technical Orders on the Internet for additional information regarding security.

**Notification Plan.** It is recommended that an AIG group be established for bases having users of a particular TO group as a means of notification. The test, although not intended

to validate current notification process for interim data, highlighted the fact that the current process is not effective for insuring that all users are notified of a change. In order for the notification process to work effectively it is imperative that SMs and MAJCOMs aggressively manage their RAC distribution list by periodically pulling an initial distribution deck from G022 to confirm that all users are in fact included on the AIG or E-mail group being utilized.

It is further recommended the agency distributing the RAC send an AUTODIN message to each base using the AIG group to provide initial notification that a RAC had been issued for a particular TO. The RAC notification message should include the affected TO number and title, change number of the RAC, criticality (Emergency or Urgent), the file names of the merged TO (if applicable) and RAC package, storage requirements (i.e., hard drive space) required to successfully accomplish the download, the E-mail transmission date and time (when distributing via E-mail) or the IP address of the FTP site where the files are located (when distributing via FTP), the User ID and password to access the FTP site (when distributing via FTP), and a point of contact and phone number to call in case of any technical problems.

**Infrastructure.** There has to be adequate infrastructure to ensure communication links are sufficient to enable the RAC process to satisfy mission requirements for timeliness and availability. Adequate PCs, printers, and copiers must be readily available. If E-mail is used as the distribution method, compatible systems must be in place to allow for successful extraction of large files. Existing connectivity to support the RAC process is also important. If FTP is used as the distribution method, projected pipeline requirements should be considered up front to ensure there is adequate infrastructure available to support distribution of merged IPDF TO and RAC files via FTP. Standardized tools should also be used. For example, use of a common FTP Client Application such as the Ipswitch Inc, WS\_FTP should be considered. Further, ensuring the availability of standardized software tools would be the first step towards building a standardized training package.

**Training.** Training is a critical element if the Single Manager is going to successfully field and sustain digital data. It is strongly recommended that across the board training on the use of the required tools and sustainment processes required for digital TO implementation be conducted. Training should be provided to everyone involved in the sustainment process. At the wholesale level, Word training should cover areas such as column formatting, font size, margins, automatic page numbering, and creating odd and even pages. Exchange training should cover cut and paste procedures as well as extracting, replacing, inserting and deleting pages. At the retail level, training on FTP procedures may be necessary and if the sustainment strategy calls for base level TODOS to merge the RAC file into the baseline IPDF TO, training on the use of DiTO and Exchange may also be required. It is further recommended that the PDSM PO support the RAC training process. For example, the PDSM PO should develop a Sustainment Training Package to educate the TO sustainment community on the RAC process and sustainment

tools. Additionally, the PDSM PO should develop Word templates to facilitate creating a RAC and include how to use the templates in the Sustainment Training Package.

**Practices and Procedures.** Recommend placing the memorandum titled Interim Practices and Procedures for Use of Rapid Action Changes (RAC) to Update Indexed Adobe™ Portable Document Format (IPDF) Technical Order (TO) Files and Associated Paper Copies of Affected TOs on the PDSM PO home page for use. It is also recommended that since this memorandum is a dynamic document, the copy placed on the PDSM PO home page be maintained and updated when appropriate to reflect the latest information. The baseline memorandum should be consistent with the lessons learned from this RAC test. It is further recommended that the practices and procedures memorandum provide options for the Single Manager to tailor their sustainment strategy. For example, even though FTP may be the “preferred” distribution method, it should not be mandated if an existing E-mail system is in place and is capable of supporting the RAC process.

**Summary.** The RAC Test proved the process and tools to provide emergency and urgent updates to Air Force TOs will work. The test showed there are several different ways to successfully field a RAC. Prior to implementing the RAC process, a sustainment strategy should be constructed to meet the needs of the TO community. Distribution and merging tradeoffs need to be considered and the sustainment strategy for using RACs (and BCUs) should be tailored to support the available infrastructure. The Single Manager should work with the user to define the sustainment strategy. Lastly, a final recommendation this report needs to emphasize is you shouldn't field digital data unless you're committed and ready to sustain it.

## **Attachments**

- Atch 1 Interim Practices and Procedures Memorandum**
- Atch 2 White Paper on Encrypting TOs**
- Atch 3 ALC Comments**
- Atch 4 Test Procedures**

## Attachment 2

### Protection of Limited Distribution Technical Orders on the Internet

**Background:** The Computer Security Act of 1987, Public Law 100-235 requires encryption of all sensitive-but-unclassified (SBU) U.S. Government information. The purpose of this act was to declare that improving the security and privacy of sensitive information in Federal computer systems is in the public interest, and to create a means for establishing minimum acceptable security practices for these systems. This law also assigned responsibility for developing the standards and guidelines for protection to the National Bureau of Standards who, in turn, delegated implementation to the National Institute of Standards and Technology (NIST).

**Specific Requirement for Protection of AF Limited Distribution TOs:** Air Force Instruction (AFI) 61-204, *Disseminating Scientific and Technical Information*, implements the use of 5 distribution statements used for the release of SBU AF TOs. Only TOs with distribution statement "A" are releasable to the public. TOs with distribution statements "B" through "F" must be protected. AFI 33-129, *Transmission of Information via the Internet*, Table 1, Security for Information Placed on the Internet/WWW defines the "MINIMUM ACCESS/SECURITY CONTROL" required for limited distribution technical orders. TOs with distribution statements "B" through "F" require access and security control via user identification, password and encryption. The use of user IDs and passwords on AF systems is governed by Air Force Systems Security Instruction (AFSSI) 5013, Password Management (to be replaced by Air Force Manual [AFMAN] 33-223). Federal Information Processing Standard (FIPS) 140-1, *Security Requirements for Cryptographic Modules*, defines the requirements for cryptographic-based security systems used to protect unclassified information within computer and telecommunications systems. The implementation module of FIPS 140-1 states that "After June 30, 1997, only FIPS 140-1 validated cryptographic modules will be considered as meeting the provisions of this standard." NIST under the Cryptographic Module Validation (CMV) program has validated a number of hardware and software encryption modules that will be used to protect SBU information, including limited distribution TOs. One of the modules identified in the CMV list, the Netscape Communications products, has been licensed by the Department of Defense (DoD) through the Defense Information Systems Agency (DISA) for use by DoD agencies. The Netscape client and server products are available through this agreement and are available for use by the Air Force.

**Summary:** The Computer Security Act of 1987 requires encryption of all sensitive-but-unclassified U.S. Government information. The responsibility for developing the guidelines for protection was assigned to NIST. NIST has validated several hardware and software modules that will be used for protection. AFI 33-129 requires user ID, password and encryption for protection of limited distribution TOs.

## Attachment 3

### ALC COMMENTS

#### OC-ALC Comments

Regarding unfamiliarity with moving text from pdf to word formats, it is recommended that extensive training on Word and Exchange training be provided. Word training should cover areas such as column formatting, automatic page numbering, odd and even pages (mirror margins). Exchange training should cover cut and paste, adding/deleting pages, inserting pages, replacing pages. Current ALC Word user comfort levels are estimated to be “memo generation” at best. Making the text “fit in the page” when a significant change has been added forces the extensive use of font size, margins, etc. Expected to be very difficult to get experienced personnel to develop necessary skills (not expected to hire younger personnel who are used to computers). Training with a detailed book (don’t just throw COTS manuals at TO personnel) strongly recommended.

The descriptions for Distiller, etc. were very distracting for someone using Adobe Acrobat 3.0 and MS Word for Win95. Adobe Acrobat install adds a “create PDF file” command under file menu. Simple point and click and you’re at PDF. No need for Distiller use. Recommend adding qualifying statements. All software was already configured for Acrobat 2.1. After realizing nothing more than converting to PDF was needed, total time was less than 5 minutes. Strongly recommend the assumption that MS Word on Win 95 will be used and configure instructions for this “usual setup” (ALCs buy most PCs using Desktop Contracts with Win95 and MS Office software). Commands/instructions for other software can be put in appendices, etc.

Operators totally unfamiliar with DiTO and Manuals/Instructions Lacking. Detailed instructions/descriptions for DiTO are needed. It was found that “manual work arounds” in MS Word (instead of auto-numbering) caused the automatic page matching in DiTO to be off. Required modification of “match up” window. Use of buttons in this window was totally by guess. Still not sure how we actually fixed the matchup sequence. Strongly recommend that instructions also be included for use of Adobe Acrobat Exchange insert page/delete page/replace page functions. For small changes to small files, Exchange would be as fast as DiTO. Updated file and RAC file could be sent to field.

At the ALC level, DiTO is useful only for large changes. Small changes can quickly use Adobe Exchange. EXCHANGE IS MUCH MORE INTUITIVE AND USER FRIENDLY. Using Adobe Exchange, for example, a second updated 00518 file was made and the un-needed pages quickly deleted. Tester had a change package in less than 5 minutes. DiTO took considerably longer. While it was the first time we had used DiTO IT WAS ONLY THE SECOND TIME WE HAD USED ADOBE EXCHANGE.

File size could be a limitation; however, providing an updated PDF file along with a PDF change package (updated front matter, changed pages, backing pages, etc.) would eliminate need for TODO in field to manipulate/use DiTO.

It is much easier to keep a smaller TO Management community (stable workforce) at an ALC up to speed on software uses at an ALC than to keep 5,000 TODOs up to speed on DiTO software and it's use (unstable workforce). With RACs being urgent or emergency changes, the simpler the better is prevailing local opinion, it logically follows that merging accomplished at the ALC would make more sense than requiring it to be accomplished at the base level. This also eliminates the cost of procuring multiple copies of Acrobat Exchange for use by TODOs at the base level.

### WR-ALC Comments

The system administrator, an experienced individual in many software application and computer functions, assisted us in completing this test.

All participants had some knowledge of the software being used but not enough to complete the test without assistance. Training is required in the use of the following software applications or the RAC concept will not be successful:

- (1) Microsoft Word
- (2) Microsoft Internet Explorer
- (3) Acrobat Exchange and various plug ins such as Infolinker
- (4) Digital Legacy Data Storage System (DLSS)
- (5) DiTO

Extracting a baseline TO from the sources and subsequently reposting the change TO is dependent upon the reliability of the source, destination system, and network. Any failures can cause significant delays.

Make sure the PC that will be used has the necessary storage space to accommodate the RAC process. Ours had 9MB free space and we needed 16 MB for the baseline TO.

Make sure that Acrobat Reader and Exchange are not embedded in Internet Explorer. If you have this software configuration you will end up with an HTML file. This will limit the capability to edit the file.

Pages C-9/C-10 and C-13/C-14 were edited in Acrobat Exchange. Could not cut and paste them into Microsoft Word. These pages also had embedded fonts. Had to delete them to make the changes.

Change bars and color print are not easily put on the same test when WORD is used as a text editor.

Embedded data interferes with cut-&-paste functions.

Making changes within Exchange is extremely limited.

In converting the change package to Acrobat 2.1 PDF compatible format, we had trouble with the conversion process. The word to PDF conversion not only condensed the pages edited, but it also changed the pages enough that we had to go back and manipulate the format in Microsoft Word in order to have the pages in a readable PDF format.

None of us had ever used DiTO. After some experimenting and educated guesses we accomplished the merging process. The quick start instructions were referenced. DiTO did not read the baseline page numbers. We had to correct the baseline page numbers in order to make ICP. The system administrator accomplished relinking.

The test group concluded that RAC concept is a feasible method of processing Urgent and Emergency technical information to the field. The main issue we had is recommending this as a standard way of doing business. We feel that some major hurdles have to be overcome before this type of change process can be recommended.

The first one is selling this to the technical order managers and technical content managers who are the prime focus for this to be successful. These positions for the most part have not been placed into a situation of hands on editorial work. Big adjustment. The editorial functions in place that provide these services and maintain the data bases that the RAC will be produced from are going to be placed into a cleaning up position. We are saying cleaning up because this will not be a quality editorial process by any means. We can not allow the integrity of our technical order databases to be lost when using this process.

The second and most important is training. Training in all aspects of this process is going to have to happen. Even though we were able to cut our time in half on this go around we needed assistance in using the software to complete the RAC change. Constant examination of the training process will be required. Each and every person involved in this process will require training and retraining as changes in the process occur.

The third item is software control. All TO managers, technical content managers, and TODOs will need to have the same versions of software. In the last year alone we have had problems exchanging information on this base between software applications. Now the problem would expand between all ALCs and operational bases.

## **Attachment 4**

### **Test Procedures**

- Atch 4-1 Wholesale Test Procedures from Scenario 1**
- Atch 4-2 Retail Test Procedures from Scenario 1**
- Atch 4-3 Wholesale Test Procedures from Scenario 2**
- Atch 4-4 Retail Test Procedures from Scenario 2**
- Atch 4-5 Wholesale Test Procedures from Scenario 3**
- Atch 4-6 Retail Test Procedures from Scenario 3**
- Atch 4-7 Wholesale Test Procedures from Scenario 4**
- Atch 4-8 Retail Test Procedures from Scenario 4**

Document Number: 98-002  
Volume Number: 1.1  
Version/revision: 1  
Security: UNCLASS  
Date: 7 Jan 98

Test Procedures  
for  
Rapid Action Change (RAC) Implementation

Wholesale  
Scenario 1 - File Transfer Protocol (FTP) RAC Only

Contract Number: Not Applicable  
CDRL: Not Applicable

prepared for

Air Force Product Data Modernization (PDSM) Program Office  
4027 Col. Glenn Hwy., Suite 300  
Dayton, OH 45431-1672

by

BTAS  
4027 Col. Glenn Hwy.,  
STE 400  
Dayton, OH 45431-1627

LOGTEC  
2900 Presidential Drive  
Fairborn, OH 45324-6292

RJO Enterprises, Inc.  
4200 Col. Glenn Hwy.,  
STE 600  
Dayton, OH 45431-1663

Distribution Statement A: Approved for public release; distribution is unlimited.

# Wholesale Test Procedures

**CAUTION: The data in this test is for testing purposes only and not for operational use.**

## **Section I - Test Information and Instructions**

The test procedures consist of two volumes: Volume 1 for wholesale and Volume 2 for retail. Each volume contains four scenarios. Each ALC will perform two tests as depicted in the following table:

<b><u>Distribution Scenarios</u></b>	<b><u>Date</u></b>	<b><u>TO</u></b>	<b><u>ALC</u></b>
1. FTP RAC only	7-9 Jan	00-5-18	OC-ALC
2. E-mail RAC only	12-15 Jan	00-5-18	OC-ALC
3. FTP updated TO and RAC	20-23 Jan	1-1-691	WR-ALC
4. E-mail updated TO and RAC	26-29 Jan	1-1-691	WR-ALC

**Note:** Before proceeding with the test, ensure the following criteria are met:  
- Set up an account on an FTP site  
- Establish USERID and Passwords for TODOs.

The TO Manager will ensure completion of the wholesale test procedure documentation.

The TO Manager/TCM will:

- Develop a TO update based on the notification of a problem.
- Format and number the TO update as a RAC (like a normal TO Change).
- Convert RAC to a non-indexed PDF file.
- Merge the digital RAC file into the affected TO's baseline file using Acrobat Exchange and DiTO software. The digital RAC file itself and/or the updated (merged) baseline TO file will either be uploaded to a File Transfer Protocol (FTP) server or attached to an E-mail for transmission to appropriate TODOs, depending on the scenario.
- Simulate notifying TODOs by AUTODIN message that a RAC was published and how it will be distributed; via FTP download, or by E-mail attachment. The message notification will include the IP address, USERID and password for the FTP server where the RAC is located, or indicate the date and time when the digital RAC file was E-mailed.

After performing a test procedure, compare the actual result with the expected result and give a rating in the space provided in the last column. Ratings that may be entered in the last column are Pass (P), Pass with Comment (PC), or Fail (F). If a procedure fails, a comment must be given to describe the result. If the procedure passes, then a comment is not necessary as long as the procedure passes unconditionally and no comments are warranted. If the procedure passes but there is some anomaly encountered while performing the task, then a comment should be made. A comment may also be used if the person performing the test feels an enhancement should be made or noted some anomaly unrelated to the procedure.

When a PC or F rating is given, send an E-mail to [support@afcpo.wpafb.af.mil](mailto:support@afcpo.wpafb.af.mil) with RAC TEST in the subject block and then use the following format:

TEST ID:  
PROBLEM:  
RECOMMENDED SOLUTION (IF ANY):

Note: Security issues have not been fully resolved. Do not transfer files other than Distribution Statement A.

Test Information

**Test Personnel:**

	<b>Technical Order Manager</b>	<b>Technical Content Manager</b>	<b>Editor</b>	<b>System Administrator</b>	<b>Other_____</b>
<b>Name</b>					
<b>Organization</b>					
<b>DSN #</b>					
<b>E-mail address</b>					

Test Platform Configuration for RAC Development

Operating Environment: \_\_\_\_\_  
(Windows 3.1, Windows 95)

System Memory: \_\_\_\_\_  
(8M, 16M, 32M RAM)

Display Resolution: \_\_\_\_\_  
(640x480, 800x600, 1028x768...)

Processor Speed: \_\_\_\_\_  
(Pentium 133/166/200/etc.;  
486 33/66/100/etc.)

**Section II - RAC Test Checklist (WHOLESALE)**

<b>TEST ID</b>	<b>Procedure</b>	<b>Expected Result</b>	<b>(P/F/PC)</b>	<b>Name of Tester</b>
1.1-1	Upon receipt of change notification: 1) Record the notification improvement report number. 2) Record date and time you received notification of the change request.	Simulated change request message is received. Improvement report #: _____ Date: _____ Time: _____(hh:mm)		
1.1-2	From the change request message, record the affected TO number.	The message should state the TO Number. TO Number _____		
1.1-3	Evaluate the requested change.	Approved Change		
1.1-4	Simulate obtaining a change number from the TO Manager. Record the change number to be assigned to the RAC package.	Change Number _____		
1.1-5	TCM develops verbatim wording for change package.	Verbatim wording developed.		
1.1-6	Format the change content into a change package. Refer to Interim Practices and Procedures Memorandum (attachment 1). Ensure backing pages are included in the change package.  Record time required to format.	RAC package is successfully generated. RAC package includes a minimum of four pages: Title page, LEP, change page, and backing pages.  Format time: _____(min)		
1.1-7	Convert change package to Acrobat 2.1 PDF compatible format (see attachment 2). Record completion time.	Time: _____(hh:mm)		
1.1-8	Have RAC placed on the FTP site for access by TODOs. Record completion time.	Time: _____(hh:mm)		
1.1-9	Generate a notification message. Include the following information in the notification message: 1) Notice that an Emergency or Urgent change has been published. 2) Affected TO number and change number 3) File names of the TO and change package 4) IP address of FTP site where Change is located. 5) USERID and PASSWORD that can be used to access the FTP site. 6) Number to call and POC in case of any technical problems. Record completion time.	Time: _____(hh:mm)		

TEST ID	Procedure	Expected Result	(P/F/PC)	Name of Tester
1.1-10	<p><b>Simulate</b> sending notification message to TODOs by E-mailing the message to support@afcpo.wpafb.af.mil.</p> <p>Enter RAC TEST in E-mail subject line.</p> <p>Record completion time</p>	Time: _____(hh:mm)		
1.1-11	<p>End of Test Scenario 1.</p> <p>Make copy of completed Test Procedure and mail original to:  PDSM PO  4027 Col. Glenn Hwy, Suite 300  Dayton, OH 45431</p>			

## COMMENTS

MEMORANDUM FOR SEE DISTRIBUTION

FROM: Det 2 ESC/AV-2  
4027 Col Glenn Hwy, Ste 300  
Dayton OH 45431-1672

SUBJECT: Interim Practices and Procedures for Use of Rapid Action Changes (RAC) to Update Indexed Adobe™ Portable Document Format (IPDF) Technical Order (TO) Files and Associated Paper Copies of Affected TOs

1. **AUTHORITY:** HQ AFMC/EN has delegated responsibility for developing AFMC TO System Business Practices and Procedures to the Air Force Product Data Systems Modernization (PDSM) Program Office, Det 2 ESC/AV-2. In addition, the Air Force Centralized TO Management (CTOM) Committee, through HQ USAF/ILMM, has tasked AV-2 to manage a special project to provide digitized Methods and Procedures TOs (MPTOs) to users on multiple media, and to develop the necessary interim Air Force Practices and Procedures to enable this action. This memorandum is authority to use the attached procedures in conjunction with, or where specified, in lieu of those published in 00-5-series TOs and AFMCMAN 21-1 when using digitized TOs.

2. **PURPOSE:** The Department of Defense has directed the Air Force to move toward an “all-digital” environment by CY2002. As part of this effort, we are converting existing paper TOs into Indexed Adobe™ Portable Document Format (IPDF) files.

a. We have developed dual processes to sustain these digitized TOs; Block Cycle Updates (BCU) for most updates and RACs to provide Urgent or Emergency updates.

b. These two processes are designed to digitize and improve the TO update process, by: (1) reducing production frequency by controlling the intervals of routine updates; (2) reducing time, manpower and production costs through digital update generation, transmittal, and use; (3) reducing postal costs; (4) reducing the time and manpower to post updates; (5) improving the accuracy of TO posting; and (6) enhancing TO usability.

3. **OVERVIEW:**

a. Block Cycle Updates are synchronized, concurrent updates to all TOs in a set or group of TOs distributed on a single medium (e.g., CD-ROM). The specific grouping of TOs and BCU frequency will be determined by the Single Manager (SM). The SM may delegate this responsibility to TO Manager or Technical Content Manager (TCM) for the TOs. All routine and many priority and urgent changes, corrections, and enhancements will be handled using the BCU process. BCUs will produce an updated digital TO file, with any pending updates merged into the baseline TO file (no posting action required by users). The updated file will simply replace the old file. If multiple TO files are being distributed on a single medium (i.e., Compact Disk-Read Only Memory – CD-ROM), then all TOs on the disk must be on the same BCU cycle. Specific BCU procedures are not included in this memorandum.

b. RACs are fully-composed change packages, just like current TO Changes. RACs are used to provide Urgent or Emergency updates between BCU periods, and replace operational and safety supplements. The composed RAC package is converted to a Portable Document Format (PDF) file to enable merger with the baseline TO's Indexed PDF (IPDF) file. Any one (vad) of five distribution scenarios, discussed in the attached procedures, could be used.

4. Point of contact for the AF PDSM Program Office is Ms Pamela Sutton, AV-2P, DSN 787-3085, Comm: (937) 427-2295, ext 340. E-mail is [suttonp@afcpo.wpafb.af.mil](mailto:suttonp@afcpo.wpafb.af.mil).

GAIL P. BROWN  
Deputy Single Manager  
Air Force PDSM Program Office

Attachment  
Interim Rapid Action Change Procedures

cc: See Distribution:

## **DISTRIBUTION**

### **ACTION:**

OC-ALC/TILDT  
3001 STAFF DR STE 1A100  
TINKER AFB OK 73145-3042

HQ USAF/ILMM  
1030 AIR FORCE PENTAGON  
WASHINGTON DC 20330-1030

WR-ALC/TILT  
420 2ND ST STE 100  
ROBINS AFB GA 31098-1640

HQ AFMC/ENPS  
4375 CHIDLAW RD STE 6  
WPAFB OH 45433-5006

OC-ALC/TILUB  
7851 2ND ST STE 200  
TINKER AFB OK 73145-9147

**I. Prerequisites/Assumptions.** These procedures assume that the user has a requirement for Air Force TOs, whether in paper form or digital Indexed Adobe™ Portable Document Format (IPDF) files. They assume that TO Supplements have been eliminated in favor of fully composed RACs as a means to update TOs. They assume the user has (or has access to) the necessary hardware, software and infrastructure to perform a File Transfer Protocol (FTP) download of digital merged baseline TO IPDF files and RAC PDF files from a host server, or has sufficient e-mail capability to receive and decode attachments. Minimum hardware requirements include a 486/33 IBM compatible PC with at least 8 MBytes of RAM, modem or LAN access, laser or ink-jet printer, and a copier. Minimum software requirements include MS Windows 3.x or higher, Adobe Acrobat™ Reader 2.0 or higher, and an e-mail and/or FTP software package (check with the local BNCC for assistance). Use of Windows 95 or higher is recommended. The Adobe Acrobat™ Reader is a free Commercial Off-The-Shelf (COTS) software application that provides the capability to view, navigate through, copy and print PDF files. If stand-alone RAC files are provided to update digital TOs in the field, TODOs must also purchase Adobe Acrobat™ Exchange (about \$200), and requisition the Digital TO (DiTO) Change Management Software program (TO 00-5-1-101) developed by the PDSM Program Office, through the TO System.

**II. Definition of a RAC.** RACs are fully-composed change pages that are prepared to distribute Emergency and Urgent updates to TOs in PDF format. Priority changes will either be held for the next Routine Block Cycle Update (BCU), or upgraded to Urgent if the TCM and Using Command determine that a RAC would be cost-effective. RACs are used in place of operational and safety supplements. In most cases, TOPS will be replaced by page changes issued during a BCU.

1. In a digital environment, RACs can be created within the time constraints inherent in non-routine updates. RACs will include, as a minimum, the TO title page, a new A-Page, at least one data page affected by the non-routine update, and the corresponding backing page (to support paper users).

2. RACs will be identified using the next sequential TO change number. If the next change number has already been assigned to a routine change currently in the publishing cycle “no-change window” (see definition below), then the RAC number will be the next one in sequence, and the supersession notice will specify the RAC’s effectivity.

3. “No Change Window” Procedures. EMERGENCY RACs will be provided within 48 hours of TO Manager/TCM notification of the problem. The supersession notice will specify that the RAC applies to both the current and immediately subsequent TO updates. If the in-work update changes affected pages or paragraphs, a second RAC may have to be issued concurrently with the routine BCU or Change. URGENT RACs will be formatted for and issued concurrently with the in-work BCU or Change.

**III. Creating a RAC.** A RAC will be developed and prepared by a TCM or TO Manager and distributed to TODOs (see paragraph IV). The following steps are involved in creating a RAC:

1. The TCM identifies and/or validates an Emergency or Urgent change requirement.

2. The TCM develops corrective action, documents it on an AFMC Form 252, Publication Change Request, according to AFMCMAN 21-1, has it coordinated and approved IAW AFMCI 21-302, and submits it to the TO Manager.

3. The TO Manager assigns a TO change number to the RAC.

4. The TCM, TO Manager or editorial/production activity converts the baseline TO pages affected by the RAC (including title and “A” pages), to a changeable format:

a. For IPDF TOs:

(1). Download a copy of the baseline IPDF TO file from DLDSS or JCALS to a PC.

(2). Copy and paste the pages affected by the RAC from the baseline IPDF TO to a “change file” in a changeable format (e.g., ASCII text, SGML, ATOS GML, Microsoft Word, WordPerfect, etc.)

b. For TO files already in a changeable (native) format:

(1). Download the baseline TO in its native format to a PC.

(2). Copy and paste pages affected by the RAC from the baseline TO file to a “change file.”

c. For Paper/Negative-only TO Masters:

(1) Obtain negative or paper masters of pages affected by the change.

(2) Convert the content of the pages affected by the RAC to a changeable file. This may be accomplished by electronically scanning the page using Optical Character Recognition (OCR) software, or by retyping the page as a last resort.

5. Make necessary changes to affected pages per AFMC Form 252 instructions.

a. Title page and “A” page format may vary slightly from the current specification or parent TO file’s format (e.g., column alignment, font size, dot leaders, graphic lines, etc.). The title page supersession notice must identify the change as an EMERGENCY or URGENT RAC and indicate which basic date is affected and which change is superseded.

b. Smaller font (9-point minimum) may be used on RAC data pages to accommodate added information on the affected page without impacting the next page. If page integrity cannot be maintained (e.g., if the new information cannot feasibly be incorporated on the affected page), then additional pages should be added as required according to current procedure.

c. Convert changed pages to PDF and save as a RAC file.

6. The TCM and TO Manager review and approve RAC.

7. The TCM or TO Manager electronically merges the PDF RAC file with the IPDF baseline TO file to create a new baseline TO, and relinks (indexes) the new file. The merged IPDF TO is returned to storage as the new master file, along with the stand-alone PDF RAC

file. If applicable, both files are uploaded to an Internet Web server to replace the previous version TO file provided via WWW and allow access to the RAC.

8. Password Protection. When a restricted distribution TO file will be placed on a public access or anonymous FTP Internet site, the file must be password protected. To protect the file, go to “File,” “Save As...,” and click on the “Security” button. The Security dialog box allows specifying passwords for “Open the Document” and “Change Security Options” (the “owner’s” password). The document may be opened using either password; the owner’s password temporarily disables the security settings. Security setting check boxes will prevent “Printing” (not usually used for this application – TODOs may have to print the RAC for paper customers), “Changing the Document” (no changes of any kind, including filling in form fields, allowed), “Selecting Text and Graphics” (allows copying selected text and graphics to a different file), and “Adding or Changing Notes and Form Fields” (allows filling in form fields, but not changing the field itself). After selections are made, click “OK” and retype the passwords in the confirmation box, then click “Save” in the Save As dialog box.

#### **CAUTION**

Passwords are not “embedded” in the file. If you forget the passwords to a document, the file cannot be recovered. Store passwords in a separate secure location in case you forget them.

#### **IV. RAC Notification and Distribution.**

1. Notification. The TCM or TO Manager will notify all affected TODOs of the RAC using any method (usually AUTODIN message) which will meet the timelines listed below. Notification messages will contain the RAC Change Number, TO and Change affected, criticality (Emergency or Urgent), and as applicable, the FTP server location, user name and password required to access the server or the e-mail transmission date and time. For FTP RAC distribution, the notification message will provide guidance on obtaining local assistance with FTP procedures. AIGs or address lists specified by AFMCI 21-302 will be used. TCMs are responsible for developing and maintaining AIGs/address lists for the distribution of notification messages. The responsible TO Manager and OC-ALC/TILUB must be on all AIGs/address lists.

2. Distribution. Any one (vad) of five scenarios (vad) of RAC distribution may be used, with scenarios using (vad) File Transfer Protocol (FTP) being preferred:

(a) The RAC would be merged electronically with the affected baseline TO and both the merged file and the stand-alone RAC file would be loaded on an FTP site. TO Distribution Offices (TODO) would be notified by message of the update, its location, and the user name and password required to access it. TODOs would then use FTP procedures to download either or both of the files, replace any digital copies of the affected TO with the new merged baseline TO, and (if necessary) print the RAC file and make double-sided copies for distribution to paper TO users. TODOs without FTP capability may obtain assistance from the Base Network Control Center (BNCC) to download the files.

#### **NOTES**

Limited distribution TO files will either be password protected, or encrypted and loaded on an access-controlled (domain or user name and password) FTP site.

When using Microsoft™'s Internet Explorer 3.02 and Adobe Acrobat™ Reader 3.0 or higher, PDF files may be downloaded from the WWW (as opposed to opened on the computer screen), using the following procedures: Right click on the file's link, and select "Save Target As" from the pop-up menu. In the Save As dialog box, select a location to which to save the file, and click Save.

(b) For smaller TOs (file size less than 2MB) and a limited user base, the merged TO file and stand-alone RAC file could be distributed to TODOs as e-mail attachments. Message notification would still be done to ensure receipt of the e-mail.

(c) Where communications bandwidth is a concern (for extremely large TO files), only the stand-alone RAC would be loaded to the FTP site, with TODO notification as in (1) above. In this and the following case, TODOs must use Adobe Acrobat™ Exchange, along with the PDSM Program Office-developed Digital TO (DiTO) Change Management Software (TO 00-5-1-101) to merge the RAC with the baseline TO file at their location.

(d) This is the same as (c), except that the stand-alone RAC is distributed via e-mail.

(e) For TODOs not having e-mail or access to the FTP server, priority mail or package services may be used to deliver paper copies of RACs or digital copies on 3.5 inch floppy disk or CD-Recordable (CD-R) disk.

3. Security. Distribution methods must provide adequate security for classified and limited-distribution files. Classified files must be encrypted using an NSA-approved encryption algorithm, while limited-distribution files require an NIST-approved system prior to being hosted on servers. Except for distribution statement "A" documents, files hosted on an FTP server will require either domain restriction and/or user name and password access control. For these reasons, e-mail may not be an acceptable vehicle for transmitting some RACs.

4. Timelines. RAC issue and notification timelines are as follows (see TO 00-5-1, Chapters 4 & 5):

a. EMERGENCY – issue within 48 hours after receipt of an emergency report (within 72 hours if report concerns work stoppage).

b. URGENT – issue within 15 calendar days after receipt of an urgent report.

c. Each base must establish procedures to expedite delivery of notification messages to affected TODOs. In general, EMERGENCY notification messages are sent using IMMEDIATE precedence, and must be delivered within 2 hours of receipt. URGENT notification messages are sent using PRIORITY precedence, requiring delivery as soon as possible during duty hours.

d. When TODOs receive notification of an EMERGENCY RAC, they have 12 hours to download, merge files, print and copy paper as required, and redistribute to their sub-accounts. For URGENT RACs, the period is 24 hours.

## V. Incorporation.

1. TODOs must process RACs as soon as possible to ensure they are posted in time to meet the criteria for Emergency or Urgent updates. When a TODO receives a RAC notification, they will determine which distribution method was used and either download (FTP) or extract from e-mail the merged TO and/or RAC files. They will determine the TO formats (paper or digital) used by their accounts and sub-accounts. If paper copies are required, the RAC file must be printed and double-sided copies distributed to the respective TODAs. If the merged TO was NOT distributed, the TODO must use DiTO and Adobe Exchange to merge the RAC with the affected TO file according to procedures provided in the Quick Start Instructions that are included with the DiTO software. The merged TO then replaces the original files. Two situations could exist with TOs used digitally:

a. TOs accessed directly from a distribution CD-ROM (from a CD tower on a LAN or CD-capable desk-top computer):

(1) The merged TO file (with RAC merged) must be FTP'd or copied to the appropriate server or PC hard drive.

(2) The CD-ROM directory/index must be edited to change the path for that TO from the CD-ROM itself to the server/hard drive where the new file is located.

(3) The CD itself must be marked to indicate that the affected TO on the CD is no longer current.

b. TOs accessed directly from the WWW or copied to a LAN server, floppy disk or PC hard drive prior to use:

(1) TOs accessed from the WWW will have been updated by the TCM/TO Manager.

(2) Affected IPDF TO files on LAN servers, floppy disks or PC hard drives will be overwritten with the merged TO file.

**2.** TODO/TODA account records (ATOMS files) must be updated to indicate the new Change number for the affected TO, and that all affected sub-accounts TOs have been updated.

## DiTO Version 2.0 Software Limitations

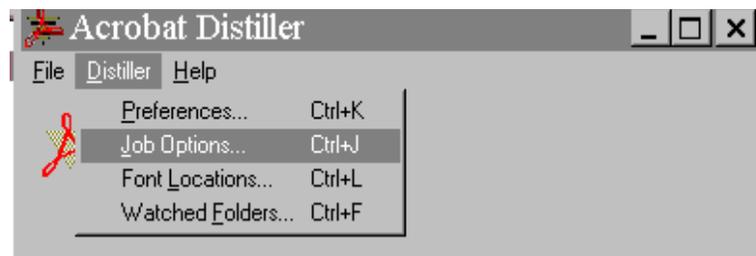
### Limitation 1

**DiTO Version 2.0 reads PDF files which are in an Acrobat 2.1 compatible format only.**

If you are creating a PDF file (for example, a change package) that you want to use with DiTO, it must be created in an Acrobat 2.1 compatible format. When using Acrobat tools version 3.0 or later, such as *Acrobat PDF Writer 3.0* or *Acrobat Distiller 3.0*, choose the option to save your files in an **Acrobat 2.1** format. Following are the procedures for each of these tools:

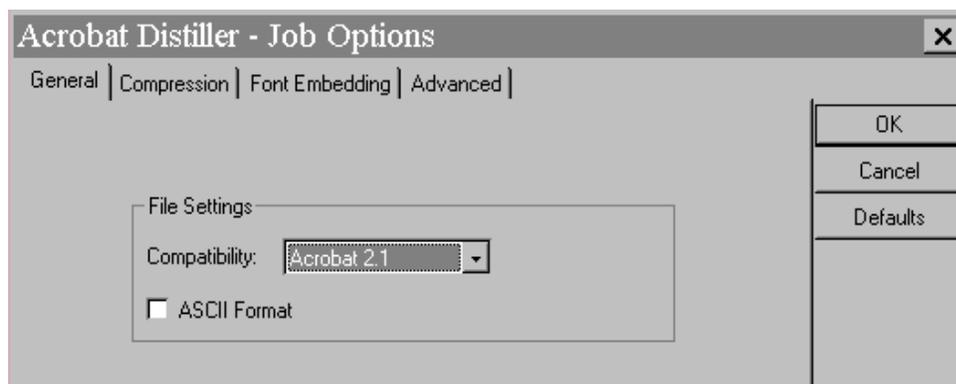
#### Acrobat Distiller 3.0

1. Start *Acrobat Distiller 3.0*.
2. On the menu bar, choose **Distiller** and then choose **Job Options**. (See Figure 61.)



**Figure 61**

3. The *Acrobat Distiller - Job Options* window will open. In the *File Settings* box, choose **Compatibility Acrobat 2.1**. (See Figure 62.)



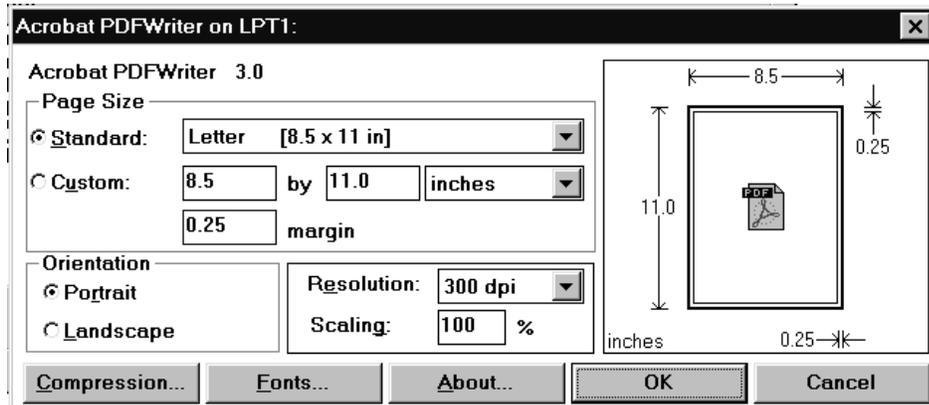
**Figure 62**

4. Click on **OK**
5. Proceed as usual to create your PDF file.

**Limitation 1 (continued)**

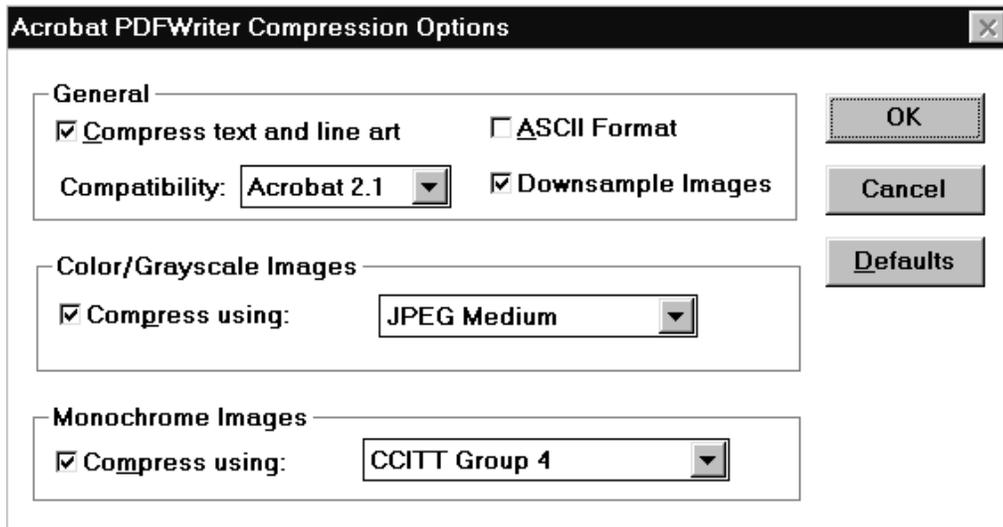
**Acrobat PDFWriter 3.0**

1. Choose printer setup options for *Acrobat PDFWriter 3.0*. The *Acrobat PDFWriter* window will open. (See *Figure 63*.)



**Figure 63**

2. Click on **Compression**. The *Acrobat PDFWriter Compression Options* window will open. (See *Figure 64*.)



3. In the *General* box, choose *Compatibility Acrobat 2.1*. Then Click on **OK**.

4. Click on **OK** in the *Acrobat PDFWriter* window

5. Proceed as usual to create your PDF file.

Document Number: 98-002  
Volume Number: 2.1  
Version/revision: 1  
Security: UNCLASS  
Date: 7 JAN 98

Test Procedures  
for  
Rapid Action Change (RAC) Implementation  
  
Retail  
Scenario 1 -File Transfer Protocol (FTP) RAC Only

Contract Number: Not Applicable  
CDRL: Not Applicable

prepared for

Air Force Product Data Modernization (PDSM) Program Office  
4027 Col. Glenn Hwy., Suite 300  
Dayton, OH 45431-1672

by

BTAS  
4027 Col. Glenn Hwy.,  
STE 400  
Dayton, OH 45431-1627

LOGTEC  
2900 Presidential Drive  
Fairborn, OH 45324-6292

RJO Enterprises, Inc.  
4200 Col. Glenn Hwy.,  
STE 600  
Dayton, OH 45431-1663

Distribution Statement A: Approved for public release; distribution is unlimited.

## Retail Test Procedures

**CAUTION: The data in this test is for testing purposes only and not for operational use.**

### Section I - Test Information and Instructions

The test procedures consist of two volumes: wholesale and retail respectively. Each volume contains four scenarios. Each participating TODO will perform four tests.

<u>Distribution Scenarios</u>	<u>Date</u>	<u>TO</u>	<u>ALC</u>
1. FTP RAC only	7-9 Jan	00-5-18	OC-ALC
2. E-mail RAC only	12-15 Jan	00-5-18	OC-ALC
3. FTP updated TO and RAC	20-23 Jan	1-1-691	WR-ALC
4. E-mail updated TO and RAC	26-29 Jan	1-1-691	WR-ALC

**Note:** Before proceeding with the test, ensure the following criteria are met:  
- Adobe Acrobat 3.0 and DiTO are loaded on your computer  
- TO 00-5-18 and TO 1-1-169 reside in the C:\TESTDATA directory and a backup directory, C:\TESTDATA\BACKUP (This allows original TOs to be restored).

Upon receipt of the simulated notification message, the TODO will, depending upon the scenario, take action to:

- Download the merged TO file and replace existing digital TO files, and/or
- Download the RAC file itself and merge it with the baseline digital TO file locally, and/or
- Download the RAC file, print it on a local printer, make a double-sided copy, and redistribute it to paper TO users for updating their books.

After performing a test procedure, compare the actual result with the expected result and give a rating in the space provided in the last column. Ratings that may be entered in the last column are Pass (P), Pass with Comment (PC), or Fail (F). If a procedure fails, a comment must be given to describe the result. If the procedure passes, then a comment is not necessary as long as the procedure passes unconditionally and no comments are warranted. If the procedure passes but there is some anomaly encountered while performing the task, then a comment should be made. A comment may also be used if the person performing the test feels an enhancement should be made or noted some anomaly unrelated to the procedure.

When a PC or F rating is given, send an E-mail to [support@afcpo.wpafb.af.mil](mailto:support@afcpo.wpafb.af.mil) with RAC TEST in the subject block and then use the following format:

TEST ID:  
PROBLEM:  
RECOMMENDED SOLUTION (IF ANY):

Note: Security issues have not been fully resolved. Do not transfer files other than Distribution Statement A.

Test Information

**Test Personnel:**

	<b>TODO</b>
<b>Name</b>	
<b>Organization</b>	
<b>DSN #</b>	
<b>E-mail address</b>	

TODO Equipment Configuration for Merging the RAC

Operating Environment: \_\_\_\_\_  
(Windows 3.1, Windows 95)

System Memory: \_\_\_\_\_  
(8M, 16M, 32M RAM)

Display Resolution: \_\_\_\_\_  
(640x480, 800x600, 1028x768,...)

Processor Speed: \_\_\_\_\_  
(Pentium 133/166/200/etc.;  
486 33/66/100/etc.)

**Section II - RAC Test Checklist (RETAIL)**

TEST ID	Procedure	Expected Result	(P/F/PC)
2.1-1	Upon receipt of simulated change notification message: 1) Record affected TO number. 2) Record RAC change number. 3) Record RAC filename. 4) Record IP address of FTP site 5) Record password and USERID. 6) Record Date and Time of receipt.	Change notification is received (simulated AUTODIN message). TO #: _____ RAC change #: _____ RAC filename: _____ IP address: _____ USERID: _____ Password: _____ Date: _____ Time: _____	
2.1-2	Access FTP site: Connect to the FTP site using the IP address, USERID and password listed above.	Connect to FTP site.  You should see the RAC file name in the default directory upon gaining access.	
2.1-3	Download RAC PDF file onto PC's hard drive and place in directory C:\TESTDATA. 1) Record time and number of attempts required to download file. 2) Record file size.	RAC PDF file resident in C:\TESTDATA. Download time: Start time: _____ Finish time: _____ # of attempts: _____ File size: _____ (MB)	
2.1-4	To support sub-accounts using digital TOs: 1) Print Quick Start Instructions (quickstrt.pdf) from the DiTO folder. 2) Ensure the RAC PDF file and baseline IPDF TO file reside in C:\TESTDATA. 3) Use DiTO and Quick Start Instructions to merge the RAC PDF change file into the baseline IPDF TO. 3A) Refer to the NOTE in Step 5 of the Quick Start instructions concerning the backing pages. 3B) After closing the <i>Problems</i> window, change PDF Page 1 under <i>Baseline pages</i> from 1:1997 to 1:(cover) by: <ul style="list-style-type: none"> <li>• Clicking on 1:1997 (1:1997 should now be highlighted)</li> <li>• Click in the <i>_new number_box</i>. Remove the words new number and type in (cover).</li> <li>• Click on the number button.</li> </ul> Under <i>page operations</i> window... <ul style="list-style-type: none"> <li>• Click on the Remake button.</li> <li>• Close the <i>Problems</i> window when it appears.</li> <li>• Check <i>page operations</i> window which now should read:</li> </ul>	Printed Quick Start Instructions should resemble attachment 1. (This is to check print capability).  Merge: Start time: _____ Finish time: _____	

TEST ID	Procedure	Expected Result	(P/F/PC)
	replace 1-2, 1-2 replace 13-16, 3-6 <ul style="list-style-type: none"> <li>• Continue with step 6 on the Quick Start instructions.</li> </ul> 4) Record time required to merge RAC file into baseline IPDF TO.		
2.1-5	Perform LEP check of changed pages in updated baseline TO. Verify that change pages are properly inserted in updated baseline TO. <b>*HINT:</b> Print LEP first.  Record time.	Start time: _____ Finish time: _____	
2.1-6	To support sub-accounts using paper TOs - 1) Print the RAC PDF file. 2) Copy double-sided, ensuring odd-numbered pages are on front and even-numbered pages are on back. 3) Inspect paper change package for accuracy. 4) Distribute copies to sub-accounts (simulated) 5) Record completion date and time.	Printed change package should resemble the TO pages being replaced.  Date: _____ Time: _____	
2.1-7	End of Test Scenario 1. Make copy of completed Test Procedure and mail original to: PDSM PO 4027 Col. Glenn Hwy, Suite 300 Dayton, OH 45431		

## COMMENTS

## Quick Start Instructions

These are quick start instructions for using DiTO 2.0 Change Incorporation Software in *Microsoft Windows 95*. These instructions show the basic steps of merging a PDF change package into a baseline IPDF TO. Refer to the Users Guide for expanded explanations on these procedures and for information on additional software capability.

Note: Updates to IPDF TOs should be accomplished on a hard drive.

*Overview: The correct IPDF TO and change package are opened in MakeICP. All page change operations are determined automatically by MakeICP and saved as an intelligent change package (.icp) file. IncICP uses the instructions in the .icp file to merge the change package into the baseline TO.*

*In this example, **baseline.pdf** represents the baseline IPDF TO and **chg-1.pdf** represents the Change Package file. Before getting started, make a backup copy of any baseline IPDF TO that you plan to update. This is a good precaution in case you save the updated IPDF TO with the same filename as the original baseline IPDF TO.*

<b>What You Will Do</b>	<b>Comments</b>
<b>Open MakeICP</b>	
1) Click the <b>Start</b> button in Windows 95, and then point to <b>Programs</b> , and then <b>DiTO</b>	The DiTO folder (or submenu) will open. Observe the <i>MakeICP</i> program and the <i>IncICP</i> program.
2) Select <b>MakeICP</b> from the DiTO folder	This will start the MakeICP program.
<hr/> <b>Using MakeICP</b>	
1) From the <i>MakeICP</i> window, Choose <b>File</b> and then choose <b>Open Both Files</b>	
2) Select baseline TO: <ul style="list-style-type: none"><li>• <b>c</b> drive</li><li>• <b>testdata</b> folder</li><li>• File name <b>baseline.pdf</b></li></ul>	In the <i>Open Baseline</i> window, locate the baseline IPDF TO file you want to update.
3) Click on <b>Open</b>	A message will appear stating that the program is “Reading page numbers.”  When the program has finished reading the page numbers, the <i>Open Change Package</i> window will open.
4) Select change package: <ul style="list-style-type: none"><li>• <b>c</b> drive</li><li>• <b>testdata</b> folder</li><li>• File name <b>chg-1.pdf</b></li></ul>	In the <i>Open Change Package</i> window, locate the change package file that you want to merge into the baseline IPDF TO file.
5) Click on <b>Open</b>	A message will appear stating that the program is “Reading page numbers.”  When finished reading the change package, the <i>Page Numbers</i> window will open with information on the baseline TO pages, the change package pages, and the page operations to be performed.
	NOTE: The change package will contain <i>backing pages</i> to the changed

## ***What You Will Do***

## ***Comments***

pages to accommodate paper users and as such, the *backing pages* may have a different change number than the current change. In this case, a *Problems* window will appear and inform the user that the list of effective pages (LEP) does not recognize the *backing pages* as part of the current change. This condition should be expected. It is a verification of the contents of the change package. Close the *Problems* window and verify that the correct pages are scheduled for replacement or insertion.

6) Select the **Close** button to close the page numbers window

This closes the page number windows and leaves the MakeICP window open.

---

### **Save ICP File**

1) Choose **File** from the menu bar of MakeICP.

2) Choose **Save ICP**

A *MakeICP* window appears indicating that the file has been saved as an .icp file and shows the directory and file name information

3) Click on **OK**

This closes the *MakeICP* message window.

---

### **Using InclCP**

1) Choose **Process** from the menu bar of MakeICP.

2) Choose **Incorporate Intelligent Change Package**

This opens Acrobat Exchange (if not already opened). After Exchange has been opened, the *Incorporate Intelligent Change Package* window is displayed showing TO Number, Baseline File, Change Number, and Change Package File.

3) Click on **OK**

This merges the change package into the baseline TO.

4) **Verify Information**

**Using the latest A page, verify that the information in the merged IPDF TO is correct.**

5) Choose **View** from the menu bar of Exchange and select **Thumbnails and Page**

This presents thumbnails. If you have gray thumbnails, proceed to step 6. If you do not have any gray thumbnails, proceed to step 7.

6) Choose **Document** from the menu bar of Exchange and select **Create All Thumbnails**

Gray thumbnails are replaced with thumbnails representing the proper TO pages.

7) Choose **File** from the menu bar of Exchange and select **Save**

Merged file is saved and update is complete.

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Volume Number: 1.2  
Version/revision: Draft  
Security: UNCLASS  
Date: 14 Jan 98

Test Procedures (TP)  
for  
Rapid Action Change (RAC) Implementation

Wholesale  
Scenario 2 - E-Mail RAC Only

prepared by the

Air Force Product Data Modernization (PDSM) Program Office  
4027 Col. Glenn Hwy., Suite 300  
Dayton, OH 45431-1672

Distribution Statement A: Approved for public release; distribution is unlimited.

# Wholesale Test Procedures

**CAUTION: The data in this test is for testing purposes only and not for operational use.**

## **Section I - Test Information and Instructions**

The test procedures consist of two volumes: Volume 1 for wholesale and Volume 2 for retail. Each volume contains four scenarios. Each ALC will perform two tests as depicted in the following table:

<b><u>Distribution Scenarios</u></b>	<b><u>Date</u></b>	<b><u>TO</u></b>	<b><u>ALC</u></b>
1. FTP RAC only	7-9 Jan	00-5-18	OC-ALC
2. E-mail RAC only	12-15 Jan	00-5-18	OC-ALC
3. FTP updated TO and RAC	20-23 Jan	1-1-691	WR-ALC
4. E-mail updated TO and RAC	26-29 Jan	1-1-691	WR-ALC

**Note:** Before proceeding with the test, ensure the following criteria are met:  
- Set up an account on an FTP site  
- Establish USERID and Passwords for TODOs.

The TO Manager will ensure completion of the wholesale test procedure documentation.

The TO Manager/TCM will:

- Develop a TO update based on the notification of a problem.
- Format and number the TO update as a RAC (like a normal TO Change).
- Convert RAC to a non-indexed PDF file.
- Merge the digital RAC file into the affected TO's baseline file using Acrobat Exchange and DiTO software. The digital RAC file itself and/or the updated (merged) baseline TO file will either be uploaded to a File Transfer Protocol (FTP) server or attached to an E-mail for transmission to appropriate TODOs, depending on the scenario.
- Simulate notifying TODOs by AUTODIN message that a RAC was published and how it will be distributed; via FTP download, or by E-mail attachment. The message notification will include the IP address, USERID and password for the FTP server where the RAC is located, or indicate the date and time when the digital RAC file was E-mailed.

After performing a test procedure, compare the actual result with the expected result and give a rating in the space provided in the last column. Ratings that may be entered in the last column are Pass (P), Pass with Comment (PC), or Fail (F). If a procedure fails, a comment must be given to describe the result. If the procedure passes, then a comment is not necessary as long as the procedure passes unconditionally and no comments are warranted. If the procedure passes but there is some anomaly encountered while performing the task, then a comment should be made. A comment may also be used if the person performing the test feels an enhancement should be made or noted some anomaly unrelated to the procedure.

When a PC or F rating is given, send an E-mail to *support@afcpo.wpafb.af.mil* with RAC TEST in the subject block and then use the following format:

TEST ID:  
PROBLEM:  
RECOMMENDED SOLUTION (IF ANY):

Note: Security issues have not been fully resolved. Do not transfer files other than Distribution Statement A.

Test Information

**Test Personnel:**

	<b>Technical Order Manager</b>	<b>Technical Content Manager</b>	<b>Editor</b>	<b>System Administrator</b>	<b>Other_____</b>
<b>Name</b>					
<b>Organization</b>					
<b>DSN #</b>					
<b>E-mail address</b>					

Test Platform Configuration for RAC Development

Operating Environment: \_\_\_\_\_  
(Windows 3.1, Windows 95)

System Memory: \_\_\_\_\_  
(8M, 16M, 32M RAM)

Display Resolution: \_\_\_\_\_  
(640x480, 800x600, 1028x768...)

Processor Speed: \_\_\_\_\_  
(Pentium 133/166/200/etc.;  
486 33/66/100/etc.)

**Section II - RAC Test Checklist (WHOLESALE)**

TEST ID	Procedure	Expected Result	(P/F/PC)	Name of Tester
1.2-1	Upon receipt of change notification: 1) Record the notification improvement report number. 2) Record data and time you received notification of the change request.	Simulated change request message is received. Improvement report #: _____ Date: _____ Time: _____(hh:mm)		
1.2-2	From the change request message record the affected TO number.	The message should state the TO Number. TO Number _____		
1.2-3	Evaluate the requested change.	Approved Change		
1.2-4	Simulate obtaining a change number from the TO Manager. Record the change number to be assigned to the RAC package.	Change Number _____		
1.2-5	TCM develops verbatim wording for change package.	Verbatim wording developed.		
1.2-6	Format the change content into a change package. Refer to Interim Practices and Procedures Memorandum (attachment 1).  <b>Ensure backing pages are included in the change package.</b>  Record time required to format.	RAC package is successfully generated. RAC package should consist of 6 pages: Title page, LEP, 2 change pages, and 2 backing pages.  Format time: _____(min)		
1.2-7	Convert change package to Acrobat 2.1 PDF compatible format (see attachment 2).  Save change package file as c:\testdata\chg1.pdf Save baseline TO as c:\testdata\00518.pdf  Record completion time.	Time: _____(hh:mm)		
1.2-8	Use DiTO 2.0 and the Quick Start Instructions (see attachment 3) to create an .icp file and merge the RAC PDF change file into the baseline IPDF TO <b>using the following file names and directories. THIS IS CRITICAL FOR THE TODO LEVEL TO WORK.</b>  Baseline TO c:\testdata\00518.pdf Change Package = c:\testdata\chg1.pdf  The .icp file will be automatically saved to c:\testdata\chg1.icp  Record time required to create .icp file and merge RAC file into baseline IPDF TO.	Create .icp file and merge: Start time: _____ Finish time: _____		

TEST ID	Procedure	Expected Result	(P/F/PC)	Name of Tester
1.2-9	Generate a notification message. Include the following information in the notification message: 1) Notice that a <b>simulated</b> Emergency or Urgent change has been published. 2) Affected TO number and change number 3) File names of the .icp file and RAC file 4) Number to call and POC in case of any technical problems.  Record completion time.	Time: _____(hh:mm)		
1.2-10	<b>Simulate</b> sending notification message to TODOs via the AUTODIN System.  Record completion time	Time: _____(hh:mm)		
1.2-11	Send notification message to TODOs by E-mail. Include the RAC file (chg1.pdf) and the .icp file (chg1.icp) as attachments. Enter RAC TEST in E-mail subject line. Send e-mail and attachments to the following addresses:  cbillingsley@ffo.afres.af.mil revans@ohsgh.ang.af.mil grossj@445clsspo.b10smtp.wpafb.af.mil lemkej@88ABW.WPAFB.AF.MIL roosevelt.sutton@langley.af.mil knoxd@hqacclg.langley.af.mil daunhev@afcpo.wpafb.af.mil  Record completion time	Time: _____(hh:mm)		
1.2-12	End of Test Scenario 2. Make copy of completed Test Procedure and mail original to: AF PDSM PO Attn: Vance Daunheimer 4027 Col. Glenn Hwy, Suite 300 Dayton, OH 45431			

## COMMENTS

MEMORANDUM FOR SEE DISTRIBUTION

FROM: Det 2 ESC/AV-2  
4027 Col Glenn Hwy, Ste 300  
Dayton OH 45431-1672

SUBJECT: Interim Practices and Procedures for Use of Rapid Action Changes (RAC) to Update Indexed Adobe™ Portable Document Format (IPDF) Technical Order (TO) Files and Associated Paper Copies of Affected TOs

1. **AUTHORITY:** HQ AFMC/EN has delegated responsibility for developing AFMC TO System Business Practices and Procedures to the Air Force Product Data Systems Modernization (PDSM) Program Office, Det 2 ESC/AV-2. In addition, the Air Force Centralized TO Management (CTOM) Committee, through HQ USAF/ILMM, has tasked AV-2 to manage a special project to provide digitized Methods and Procedures TOs (MPTOs) to users on multiple media, and to develop the necessary interim Air Force Practices and Procedures to enable this action. This memorandum is authority to use the attached procedures in conjunction with, or where specified, in lieu of those published in 00-5-series TOs and AFMCMAN 21-1 when using digitized TOs.

2. **PURPOSE:** The Department of Defense has directed the Air Force to move toward an “all-digital” environment by CY2002. As part of this effort, we are converting existing paper TOs into Indexed Adobe™ Portable Document Format (IPDF) files.

a. We have developed dual processes to sustain these digitized TOs; Block Cycle Updates (BCU) for most updates and RACs to provide Urgent or Emergency updates.

b. These two processes are designed to digitize and improve the TO update process, by: (1) reducing production frequency by controlling the intervals of routine updates; (2) reducing time, manpower and production costs through digital update generation, transmittal, and use; (3) reducing postal costs; (4) reducing the time and manpower to post updates; (5) improving the accuracy of TO posting; and (6) enhancing TO usability.

3. **OVERVIEW:**

a. Block Cycle Updates are synchronized, concurrent updates to all TOs in a set or group of TOs distributed on a single medium (e.g., CD-ROM). The specific grouping of TOs and BCU frequency will be determined by the Single Manager (SM). The SM may delegate this responsibility to TO Manager or Technical Content Manager (TCM) for the TOs. All routine and many priority and urgent changes, corrections, and enhancements will be handled using the BCU process. BCUs will produce an updated digital TO file, with any pending updates merged into the baseline TO file (no posting action required by users). The updated file will simply replace the old file. If multiple TO files are being distributed on a single medium (i.e., Compact Disk-Read Only Memory – CD-ROM), then all TOs on the disk must be on the same BCU cycle. Specific BCU procedures are not included in this memorandum.

b. RACs are fully-composed change packages, just like current TO Changes. RACs are used to provide Urgent or Emergency updates between BCU periods, and replace operational and safety supplements. The composed RAC package is converted to a Portable Document Format (PDF) file to enable merger with the baseline TO's Indexed PDF (IPDF) file. Any one (vad) of five distribution scenarios, discussed in the attached procedures, could be used.

4. Point of contact for the AF PDSM Program Office is Ms Pamela Sutton, AV-2P, DSN 787-3085, Comm: (937) 427-2295, ext 340. E-mail is [suttonp@afcpo.wpafb.af.mil](mailto:suttonp@afcpo.wpafb.af.mil).

GAIL P. BROWN  
Deputy Single Manager  
Air Force PDSM Program Office

Attachment  
Interim Rapid Action Change Procedures

cc: See Distribution:

## **DISTRIBUTION**

### **ACTION:**

OC-ALC/TILDT  
3001 STAFF DR STE 1A100  
TINKER AFB OK 73145-3042

HQ USAF/ILMM  
1030 AIR FORCE PENTAGON  
WASHINGTON DC 20330-1030

WR-ALC/TILT  
420 2ND ST STE 100  
ROBINS AFB GA 31098-1640

HQ AFMC/ENPS  
4375 CHIDLAW RD STE 6  
WPAFB OH 45433-5006

OC-ALC/TILUB  
7851 2ND ST STE 200  
TINKER AFB OK 73145-9147

**I. Prerequisites/Assumptions.** These procedures assume that the user has a requirement for Air Force TOs, whether in paper form or digital Indexed Adobe™ Portable Document Format (IPDF) files. They assume that TO Supplements have been eliminated in favor of fully composed RACs as a means to update TOs. They assume the user has (or has access to) the necessary hardware, software and infrastructure to perform a File Transfer Protocol (FTP) download of digital merged baseline TO IPDF files and RAC PDF files from a host server, or has sufficient e-mail capability to receive and decode attachments. Minimum hardware requirements include a 486/33 IBM compatible PC with at least 8 MBytes of RAM, modem or LAN access, laser or ink-jet printer, and a copier. Minimum software requirements include MS Windows 3.x or higher, Adobe Acrobat™ Reader 2.0 or higher, and an e-mail and/or FTP software package (check with the local BNCC for assistance). Use of Windows 95 or higher is recommended. The Adobe Acrobat™ Reader is a free Commercial Off-The-Shelf (COTS) software application that provides the capability to view, navigate through, copy and print PDF files. If stand-alone RAC files are provided to update digital TOs in the field, TODOs must also purchase Adobe Acrobat™ Exchange (about \$200), and requisition the Digital TO (DiTO) Change Management Software program (TO 00-5-1-101) developed by the PDSM Program Office, through the TO System.

**II. Definition of a RAC.** RACs are fully-composed change pages that are prepared to distribute Emergency and Urgent updates to TOs in PDF format. Priority changes will either be held for the next Routine Block Cycle Update (BCU), or upgraded to Urgent if the TCM and Using Command determine that a RAC would be cost-effective. RACs are used in place of operational and safety supplements. In most cases, TOPS will be replaced by page changes issued during a BCU.

1. In a digital environment, RACs can be created within the time constraints inherent in non-routine updates. RACs will include, as a minimum, the TO title page, a new A-Page, at least one data page affected by the non-routine update, and the corresponding backing page (to support paper users).

2. RACs will be identified using the next sequential TO change number. If the next change number has already been assigned to a routine change currently in the publishing cycle “no-change window” (see definition below), then the RAC number will be the next one in sequence, and the supersession notice will specify the RAC’s effectivity.

3. “No Change Window” Procedures. EMERGENCY RACs will be provided within 48 hours of TO Manager/TCM notification of the problem. The supersession notice will specify that the RAC applies to both the current and immediately subsequent TO updates. If the in-work update changes affected pages or paragraphs, a second RAC may have to be issued concurrently with the routine BCU or Change. URGENT RACs will be formatted for and issued concurrently with the in-work BCU or Change.

**III. Creating a RAC.** A RAC will be developed and prepared by a TCM or TO Manager and distributed to TODOs (see paragraph IV). The following steps are involved in creating a RAC:

1. The TCM identifies and/or validates an Emergency or Urgent change requirement.

2. The TCM develops corrective action, documents it on an AFMC Form 252, Publication Change Request, according to AFMCMAN 21-1, has it coordinated and approved IAW AFMCI 21-302, and submits it to the TO Manager.

3. The TO Manager assigns a TO change number to the RAC.

4. The TCM, TO Manager or editorial/production activity converts the baseline TO pages affected by the RAC (including title and “A” pages), to a changeable format:

a. For IPDF TOs:

(1). Download a copy of the baseline IPDF TO file from DLDSS or JCALS to a PC.

(2). Copy and paste the pages affected by the RAC from the baseline IPDF TO to a “change file” in a changeable format (e.g., ASCII text, SGML, ATOS GML, Microsoft Word, WordPerfect, etc.)

b. For TO files already in a changeable (native) format:

(1). Download the baseline TO in its native format to a PC.

(2). Copy and paste pages affected by the RAC from the baseline TO file to a “change file.”

c. For Paper/Negative-only TO Masters:

(1) Obtain negative or paper masters of pages affected by the change.

(2) Convert the content of the pages affected by the RAC to a changeable file. This may be accomplished by electronically scanning the page using Optical Character Recognition (OCR) software, or by retyping the page as a last resort.

5. Make necessary changes to affected pages per AFMC Form 252 instructions.

a. Title page and “A” page format may vary slightly from the current specification or parent TO file’s format (e.g., column alignment, font size, dot leaders, graphic lines, etc.). The title page supersession notice must identify the change as an EMERGENCY or URGENT RAC and indicate which basic date is affected and which change is superseded.

b. Smaller font (9-point minimum) may be used on RAC data pages to accommodate added information on the affected page without impacting the next page. If page integrity cannot be maintained (e.g., if the new information cannot feasibly be incorporated on the affected page), then additional pages should be added as required according to current procedure.

c. Convert changed pages to PDF and save as a RAC file.

6. The TCM and TO Manager review and approve RAC.

7. The TCM or TO Manager electronically merges the PDF RAC file with the IPDF baseline TO file to create a new baseline TO, and relinks (indexes) the new file. The merged IPDF TO is returned to storage as the new master file, along with the stand-alone PDF RAC

file. If applicable, both files are uploaded to an Internet Web server to replace the previous version TO file provided via WWW and allow access to the RAC.

8. Password Protection. When a restricted distribution TO file will be placed on a public access or anonymous FTP Internet site, the file must be password protected. To protect the file, go to “File,” “Save As...,” and click on the “Security” button. The Security dialog box allows specifying passwords for “Open the Document” and “Change Security Options” (the “owner’s” password). The document may be opened using either password; the owner’s password temporarily disables the security settings. Security setting check boxes will prevent “Printing” (not usually used for this application – TODOs may have to print the RAC for paper customers), “Changing the Document” (no changes of any kind, including filling in form fields, allowed), “Selecting Text and Graphics” (allows copying selected text and graphics to a different file), and “Adding or Changing Notes and Form Fields” (allows filling in form fields, but not changing the field itself). After selections are made, click “OK” and retype the passwords in the confirmation box, then click “Save” in the Save As dialog box.

#### **CAUTION**

Passwords are not “embedded” in the file. If you forget the passwords to a document, the file cannot be recovered. Store passwords in a separate secure location in case you forget them.

#### **IV. RAC Notification and Distribution.**

1. Notification. The TCM or TO Manager will notify all affected TODOs of the RAC using any method (usually AUTODIN message) which will meet the timelines listed below. Notification messages will contain the RAC Change Number, TO and Change affected, criticality (Emergency or Urgent), and as applicable, the FTP server location, user name and password required to access the server or the e-mail transmission date and time. For FTP RAC distribution, the notification message will provide guidance on obtaining local assistance with FTP procedures. AIGs or address lists specified by AFMCI 21-302 will be used. TCMs are responsible for developing and maintaining AIGs/address lists for the distribution of notification messages. The responsible TO Manager and OC-ALC/TILUB must be on all AIGs/address lists.

2. Distribution. Any one (vad) of five scenarios (vad) of RAC distribution may be used, with scenarios using (vad) File Transfer Protocol (FTP) being preferred:

(a) The RAC would be merged electronically with the affected baseline TO and both the merged file and the stand-alone RAC file would be loaded on an FTP site. TO Distribution Offices (TODO) would be notified by message of the update, its location, and the user name and password required to access it. TODOs would then use FTP procedures to download either or both of the files, replace any digital copies of the affected TO with the new merged baseline TO, and (if necessary) print the RAC file and make double-sided copies for distribution to paper TO users. TODOs without FTP capability may obtain assistance from the Base Network Control Center (BNCC) to download the files.

#### **NOTES**

Limited distribution TO files will either be password protected, or encrypted and loaded on an access-controlled (domain or user name and password) FTP site.

When using Microsoft™'s Internet Explorer 3.02 and Adobe Acrobat™ Reader 3.0 or higher, PDF files may be downloaded from the WWW (as opposed to opened on the computer screen), using the following procedures: Right click on the file's link, and select "Save Target As" from the pop-up menu. In the Save As dialog box, select a location to which to save the file, and click Save.

(b) For smaller TOs (file size less than 2MB) and a limited user base, the merged TO file and stand-alone RAC file could be distributed to TODOs as e-mail attachments. Message notification would still be done to ensure receipt of the e-mail.

(c) Where communications bandwidth is a concern (for extremely large TO files), only the stand-alone RAC would be loaded to the FTP site, with TODO notification as in (1) above. In this and the following case, TODOs must use Adobe Acrobat™ Exchange, along with the PDSM Program Office-developed Digital TO (DiTO) Change Management Software (TO 00-5-1-101) to merge the RAC with the baseline TO file at their location.

(d) This is the same as (c), except that the stand-alone RAC is distributed via e-mail.

(e) For TODOs not having e-mail or access to the FTP server, priority mail or package services may be used to deliver paper copies of RACs or digital copies on 3.5 inch floppy disk or CD-Recordable (CD-R) disk.

3. Security. Distribution methods must provide adequate security for classified and limited-distribution files. Classified files must be encrypted using an NSA-approved encryption algorithm, while limited-distribution files require an NIST-approved system prior to being hosted on servers. Except for distribution statement "A" documents, files hosted on an FTP server will require either domain restriction and/or user name and password access control. For these reasons, e-mail may not be an acceptable vehicle for transmitting some RACs.

4. Timelines. RAC issue and notification timelines are as follows (see TO 00-5-1, Chapters 4 & 5):

a. EMERGENCY – issue within 48 hours after receipt of an emergency report (within 72 hours if report concerns work stoppage).

b. URGENT – issue within 15 calendar days after receipt of an urgent report.

c. Each base must establish procedures to expedite delivery of notification messages to affected TODOs. In general, EMERGENCY notification messages are sent using IMMEDIATE precedence, and must be delivered within 2 hours of receipt. URGENT notification messages are sent using PRIORITY precedence, requiring delivery as soon as possible during duty hours.

d. When TODOs receive notification of an EMERGENCY RAC, they have 12 hours to download, merge files, print and copy paper as required, and redistribute to their sub-accounts. For URGENT RACs, the period is 24 hours.

## **V. Incorporation.**

1. TODOs must process RACs as soon as possible to ensure they are posted in time to meet the criteria for Emergency or Urgent updates. When a TODO receives a RAC notification, they will determine which distribution method was used and either download (FTP) or extract from e-mail the merged TO and/or RAC files. They will determine the TO formats (paper or digital) used by their accounts and sub-accounts. If paper copies are required, the RAC file must be printed and double-sided copies distributed to the respective TODAs. If the merged TO was NOT distributed, the TODO must use DiTO and Adobe Exchange to merge the RAC with the affected TO file according to procedures provided in the Quick Start Instructions that are included with the DiTO software. The merged TO then replaces the original files. Two situations could exist with TOs used digitally:

a. TOs accessed directly from a distribution CD-ROM (from a CD tower on a LAN or CD-capable desk-top computer):

(1) The merged TO file (with RAC merged) must be FTP'd or copied to the appropriate server or PC hard drive.

(2) The CD-ROM directory/index must be edited to change the path for that TO from the CD-ROM itself to the server/hard drive where the new file is located.

(3) The CD itself must be marked to indicate that the affected TO on the CD is no longer current.

b. TOs accessed directly from the WWW or copied to a LAN server, floppy disk or PC hard drive prior to use:

(1) TOs accessed from the WWW will have been updated by the TCM/TO Manager.

(2) Affected IPDF TO files on LAN servers, floppy disks or PC hard drives will be overwritten with the merged TO file.

**2.** TODO/TODA account records (ATOMS files) must be updated to indicate the new Change number for the affected TO, and that all affected sub-accounts TOs have been updated.

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Version/revision: Draft  
Security: UNCLASS  
Date: 15 Jan 98

Test Procedures (TP)  
for  
Rapid Action Change (RAC) Implementation

Retail  
Scenario 2 - E-Mail RAC Only

prepared by the

Air Force Product Data Modernization (PDSM) Program Office  
4027 Col. Glenn Hwy., Suite 300  
Dayton, OH 45431-1672

Distribution Statement A: Approved for public release; distribution is unlimited.

## Retail Test Procedures

**CAUTION: The data in this test is for testing purposes only and not for operational use.**

### Section I - Test Information and Instructions

The test procedures consist of two volumes: wholesale and retail respectively. Each volume contains four scenarios. Each participating TODO will perform four tests.

<u>Distribution Scenarios</u>	<u>Date</u>	<u>TO</u>	<u>ALC</u>
1. FTP RAC only	7-9 Jan	00-5-18	OC-ALC
2. E-mail RAC only	12-15 Jan	00-5-18	OC-ALC
3. FTP updated TO and RAC	20-23 Jan	1-1-691	WR-ALC
4. E-mail updated TO and RAC	26-29 Jan	1-1-691	WR-ALC

**Note:** Before proceeding with the test, ensure the following criteria are met:

- Adobe Acrobat 3.0 and DiTO are loaded on your computer
- TO 00-5-18 and TO 1-1-691 reside in the C:\TESTDATA directory and a backup directory, C:\TESTDATA\BACKUP (This allows original TOs to be restored).
- Ensure FTP utility is available

Upon receipt of the simulated notification message, the TODO will, depending upon the scenario, take action to:

- Download the merged TO file and replace existing digital TO files, and/or
- Download the RAC file itself and merge it with the baseline digital TO file locally, and/or
- Download the RAC file, print it on a local printer, make a double-sided copy, and redistribute it to paper TO users for updating their books.

After performing a test procedure, compare the actual result with the expected result and give a rating in the space provided in the last column. Ratings that may be entered in the last column are Pass (P), Pass with Comment (PC), or Fail (F). If a procedure fails, a comment must be given to describe the result. If the procedure passes, then a comment is not necessary as long as the procedure passes unconditionally and no comments are warranted. If the procedure passes but there is some anomaly encountered while performing the task, then a comment should be made. A comment may also be used if the person performing the test feels an enhancement should be made or noted some anomaly unrelated to the procedure.

When a PC or F rating is given, send an E-mail to [support@afcpo.wpafb.af.mil](mailto:support@afcpo.wpafb.af.mil) with RAC TEST in the subject block and then use the following format:

TEST ID:  
PROBLEM:  
RECOMMENDED SOLUTION (IF ANY):

Note: Security issues have not been fully resolved. Do not transfer files other than Distribution Statement A.

Test Information

**Test Personnel:**

	<b>TODO</b>
<b>Name</b>	
<b>Organization</b>	
<b>DSN #</b>	
<b>E-mail address</b>	

TODO Equipment Configuration for Merging the RAC

Operating Environment: \_\_\_\_\_  
(Windows 3.1, Windows 95)

System Memory: \_\_\_\_\_  
(8M, 16M, 32M RAM)

Display Resolution: \_\_\_\_\_  
(640x480, 800x600, 1028x768,...)

Processor Speed: \_\_\_\_\_  
(Pentium 133/166/200/etc.;  
486 33/66/100/etc.)

**Section II - RAC Test Checklist (RETAIL)**

<b>TEST ID</b>	<b>Procedure</b>	<b>Expected Result</b>	<b>(P/F/PC)</b>
2.2-1	<p>Upon receipt of simulated change notification message (will be included with e-mail):</p> <ol style="list-style-type: none"> <li>1) Record affected TO number.</li> <li>2) Record RAC change number.</li> <li>3) Record RAC filename.</li> <li>4) Record .icp filename</li> <li>5) Record Date and Time of receipt.</li> </ol>	<p>Change notification (simulated AUTODIN message) indicates RAC will be transferred via E-mail attachment.</p> <p>TO #: _____</p> <p>RAC change #: _____</p> <p>RAC filename: _____</p> <p>.icp filename: _____</p> <p>Date: _____</p> <p>Time: _____ (hh:mm)</p>	
2.2-2	<p>Upon receipt of the E-mail with attached PDF RAC file and .icp file:</p> <ol style="list-style-type: none"> <li>1) Record time</li> <li>2) Verify that the attached .icp and RAC filenames are the same as the ones documented above.</li> </ol>	<p>PDF RAC file received as an E-mail attachment.</p> <p>Time: _____ (hh:mm)</p>	
2.2-3	<p>Extract the attached .icp file and RAC PDF file to the directory C:\TESTDATA on the PC's hard drive.</p> <ol style="list-style-type: none"> <li>1) Record time.</li> <li>2) Record file size.</li> </ol>	<p>RAC PDF file resident in C:\TESTDATA.</p> <p>Time: _____ (hh:mm)</p> <p>File size: _____ (MB)</p>	
2.2-4	<p>To support sub-accounts using digital TOs:</p> <ol style="list-style-type: none"> <li>1) Use the Quick Start Instructions (see attachment 1) to merge the change package into the baseline IPDF TO.</li> <li>2) Record time required to merge RAC file into baseline IPDF TO.</li> </ol>	<p>Merge:</p> <p>Start time: _____</p> <p>Finish time: _____</p>	
2.2-5	<p>To support sub-accounts using paper TOs -</p> <ol style="list-style-type: none"> <li>1) Print the RAC PDF file.</li> <li>2) Copy double-sided, ensuring odd-numbered pages are on front and even-numbered pages are on back.</li> <li>3) Inspect paper change package for accuracy.</li> <li>4) Distribute copies to sub-accounts (simulated)</li> <li>5) Record completion date and time.</li> </ol>	<p>Printed change package should resemble the package in attachment 1.</p> <p>Date: _____</p> <p>Time: _____</p>	
2.2-6	<p>End of Test Scenario 2.</p> <p>Make copy of completed Test Procedure and mail original to:</p> <p>AF PDSM PO            Attention: Vance Daunheimer            4027 Col. Glenn Hwy, Suite 300            Dayton, OH 45431</p>		

## COMMENTS

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Test Procedures (TP)  
for  
Rapid Action Change (RAC) Implementation

Wholesale  
Scenario 3 - FTP Merged TO and RAC

prepared by the

Air Force Product Data Modernization (PDSM) Program Office  
4027 Col. Glenn Hwy., Suite 300  
Dayton, OH 45431-1672

Distribution Statement A: Approved for public release; distribution is unlimited.

# Wholesale Test Procedures

**CAUTION: The data in this test is for testing purposes only and not for operational use.**

## **Section I - Test Information and Instructions**

The test procedures consist of two volumes: Volume 1 for wholesale and Volume 2 for retail. Each volume contains four scenarios. Each ALC will perform two tests as depicted in the following table:

<b><u>Distribution Scenarios</u></b>	<b><u>Date</u></b>	<b><u>TO</u></b>	<b><u>ALC</u></b>
1. FTP RAC only	7-9 Jan	00-5-18	OC-ALC
2. E-mail RAC only	12-15 Jan	00-5-18	OC-ALC
3. FTP updated TO and RAC	4-6 Feb	1-1-691	WR-ALC
4. E-mail updated TO and RAC	11-13 Feb	1-1-691	WR-ALC

**Note:** Before proceeding with the test, ensure the following criteria are met:  
- Set up an account on an FTP site  
- Establish USERID and Passwords for TODOs.

The TO Manager will ensure completion of the wholesale test procedure documentation.

The TO Manager/TCM will:

- Develop a TO update based on the notification of a problem.
- Format and number the TO update as a RAC (like a normal TO Change).
- Convert RAC to a non-indexed PDF file.
- Merge the digital RAC file into the affected TO's baseline file using Acrobat Exchange and DiTO software. The digital RAC file itself and the updated (merged) baseline TO file will either be uploaded to a File Transfer Protocol (FTP) server or attached to an E-mail for transmission to appropriate TODOs, depending on the scenario.
- Simulate notifying TODOs by AUTODIN message that a RAC was published and how it will be distributed; via FTP download, or by E-mail attachment. The message notification will include the IP address, USERID and password for the FTP server where the RAC is located, or indicate the date and time when the digital RAC file was E-mailed.

After performing a test procedure, compare the actual result with the expected result and give a rating in the space provided in the last column. Ratings that may be entered in the last column are Pass (P), Pass with Comment (PC), or Fail (F). If a procedure fails, a comment must be given to describe the result. If the procedure passes, then a comment is not necessary as long as the procedure passes unconditionally and no comments are warranted. If the procedure passes but there is some anomaly encountered while performing the task, then a comment should be made. A comment may also be used if the person performing the test feels an enhancement should be made or noted some anomaly unrelated to the procedure.

When a PC or F rating is given, send an E-mail to *support@afcpo.wpafb.af.mil* with RAC TEST in the subject block and then use the following format:

TEST ID:  
PROBLEM:  
RECOMMENDED SOLUTION (IF ANY):

Note: Security issues have not been fully resolved. Do not transfer files other than Distribution Statement A.

Test Information

**Test Personnel:**

	<b>Technical Order Manager</b>	<b>Technical Content Manager</b>	<b>Editor</b>	<b>System Administrator</b>	<b>Other_____</b>
<b>Name</b>					
<b>Organization</b>					
<b>DSN #</b>					
<b>E-mail address</b>					

Test Platform Configuration for RAC Development

Operating Environment: \_\_\_\_\_  
(Windows 3.1, Windows 95)

System Memory: \_\_\_\_\_  
(8M, 16M, 32M RAM)

Display Resolution: \_\_\_\_\_  
(640x480, 800x600, 1028x768...)

Processor Speed: \_\_\_\_\_  
(Pentium 133/166/200/etc.;  
486 33/66/100/etc.)

**Section II - RAC Test Checklist (WHOLESALE)**

<b>TEST ID</b>	<b>Procedure</b>	<b>Expected Result</b>	<b>(P/F/PC)</b>	<b>Name of Tester</b>
1.3-1	<p>Upon receipt of the change notification message (which was part of the e-mail these test procedures were attached to):</p> <p>1) Record the notification improvement report number. 2) Record data and time you received notification of the change request.</p>	<p>Simulated change request message is received.</p> <p>Improvement report #: _____ Date: _____ Time: _____(hh:mm)</p>		
1.3-2	<p>From the change request message record the affected TO number.</p>	<p>The message should state the TO Number. TO Number _____</p>		
1.3-3	<p>Evaluate the requested change.</p>	<p>Approved Change</p>		
1.3-4	<p>Simulate obtaining a change number from the TO Manager. Record the change number to be assigned to the RAC package.</p>	<p>Change Number _____</p>		
1.3-5	<p>TCM develops verbatim wording for change package.</p>	<p>Verbatim wording developed.</p>		
1.3-6	<p>Format the change content into a change package. Refer to Interim Practices and Procedures Memorandum (attachment 1).</p> <p><b>Ensure backing pages are included in the change package.</b></p> <p>Record time required to format.</p>	<p>RAC package is successfully generated.</p> <p>Format time: _____(min)</p>		
1.3-7	<p>Convert change package to Acrobat 2.1 PDF compatible format (see attachment 2). Place in c:\testdata directory as chg1.pdf. Record completion time.</p>	<p>Time: _____(hh:mm)</p>		
1.3-8	<p>Use DiTO 2.0 and the Quick Start Instructions (see attachment 3) to merge the RAC PDF change file into the baseline IPDF TO creating a new updated baseline TO.</p> <p>Baseline TO = c:\testdata\11691.pdf Change Package = c:\testdata\chg1.pdf</p> <p>Record time required to merge RAC file into baseline IPDF TO.</p>	<p>Time to merge:</p> <p>Start time: _____</p> <p>Finish time: _____</p>		
1.3-9	<p>Place RAC and merged IPDF TO on FTP site. (ascc.robins.af.mil 137.244.160.11)</p>			

TEST ID	Procedure	Expected Result	(P/F/PC)	Name of Tester
1.3-10	<p>Generate a notification message.            Include the following information in the notification message:</p> <ol style="list-style-type: none"> <li>1) Notice that a <b>simulated</b> Emergency Rapid Action Change has been published.</li> <li>2) Affected TO number and change number: Change 1 to T.O. 1-1-691</li> <li>3) File names of the IPDF TO and RAC: IPDF TO file: 11691.pdf RAC file: chg1.pdf</li> <li>4) IP address of FTP site: (ascc.robins.af.mil 137.244.160.11)</li> <li>5) User ID: toaccess</li> <li>6) Password: RobinsAFB (R and AFB ARE in CAPS)</li> <li>7) Number to call and POC in case of any technical problems.</li> </ol> <p>Record completion time.</p>	Time: _____(hh:mm)		
1.3-11	<p><b>Simulate</b> sending notification message to TODOs via the AUTODIN System.</p> <p>Record completion time</p>	Time: _____(hh:mm)		
1.3-12	<p>Send notification message to TODOs via e-mail as prepared in test procedure 1.3-10. Enter RAC TEST - Scenario 3 in E-mail subject line. Send RAC notification message by e-mail to the following addresses:</p> <p>cbillingsley@ffo.afres.af.mil            revans@ohsgh.ang.af.mil            grossj@445clsspo.b10smtp.wpafb.af.mil            lemkej@88ABW.WPAFB.AF.MIL            roosevelt.sutton@langley.af.mil            knoxd@hqacclg.langley.af.mil            daunhev@afcpo.wpafb.af.mil</p> <p>Record completion time</p>	Time: _____(hh:mm)		
1.3-13	<p>End of Test Scenario 3.            Make copy of completed Test Procedure and mail original to:            AF PDSM PO            Attn: Vance Daunheimer            4027 Col. Glenn Hwy, Suite 300            Dayton, OH 45431</p>			

## COMMENTS

MEMORANDUM FOR SEE DISTRIBUTION

FROM: Det 2 ESC/AV-2  
4027 Col Glenn Hwy, Ste 300  
Dayton OH 45431-1672

SUBJECT: Interim Practices and Procedures for Use of Rapid Action Changes (RAC) to Update Indexed Adobe™ Portable Document Format (IPDF) Technical Order (TO) Files and Associated Paper Copies of Affected TOs

1. **AUTHORITY:** HQ AFMC/EN has delegated responsibility for developing AFMC TO System Business Practices and Procedures to the Air Force Product Data Systems Modernization (PDSM) Program Office, Det 2 ESC/AV-2. In addition, the Air Force Centralized TO Management (CTOM) Committee, through HQ USAF/ILMM, has tasked AV-2 to manage a special project to provide digitized Methods and Procedures TOs (MPTOs) to users on multiple media, and to develop the necessary interim Air Force Practices and Procedures to enable this action. This memorandum is authority to use the attached procedures in conjunction with, or where specified, in lieu of those published in 00-5-series TOs and AFMCMAN 21-1 when using digitized TOs.

2. **PURPOSE:** The Department of Defense has directed the Air Force to move toward an “all-digital” environment by CY2002. As part of this effort, we are converting existing paper TOs into Indexed Adobe™ Portable Document Format (IPDF) files.

a. We have developed dual processes to sustain these digitized TOs; Block Cycle Updates (BCU) for most updates and RACs to provide Urgent or Emergency updates.

b. These two processes are designed to digitize and improve the TO update process, by: (1) reducing production frequency by controlling the intervals of routine updates; (2) reducing time, manpower and production costs through digital update generation, transmittal, and use; (3) reducing postal costs; (4) reducing the time and manpower to post updates; (5) improving the accuracy of TO posting; and (6) enhancing TO usability.

3. **OVERVIEW:**

a. Block Cycle Updates are synchronized, concurrent updates to all TOs in a set or group of TOs distributed on a single medium (e.g., CD-ROM). The specific grouping of TOs and BCU frequency will be determined by the Single Manager (SM). The SM may delegate this responsibility to TO Manager or Technical Content Manager (TCM) for the TOs. All routine and many priority and urgent changes, corrections, and enhancements will be handled using the BCU process. BCUs will produce an updated digital TO file, with any pending updates merged into the baseline TO file (no posting action required by users). The updated file will simply replace the old file. If multiple TO files are being distributed on a single medium (i.e., Compact Disk-Read Only Memory – CD-ROM), then all TOs on the disk must be on the same BCU cycle. Specific BCU procedures are not included in this memorandum.

b. RACs are fully-composed change packages, just like current TO Changes. RACs are used to provide Urgent or Emergency updates between BCU periods, and replace operational and safety supplements. The composed RAC package is converted to a Portable Document Format (PDF) file to enable merger with the baseline TO's Indexed PDF (IPDF) file. Any one of five distribution scenarios, discussed in the attached procedures, could be used.

4. Point of contact for the AF PDSM Program Office is Ms Pamela Sutton, AV-2P, DSN 787-3085, Comm: (937) 427-2295, ext 340. E-mail is [suttonp@afcpo.wpafb.af.mil](mailto:suttonp@afcpo.wpafb.af.mil).

GAIL P. BROWN  
Deputy Single Manager  
Air Force PDSM Program Office

Attachment  
Interim Rapid Action Change Procedures

cc: See Distribution:

## **DISTRIBUTION**

### **ACTION:**

OC-ALC/TILDT  
3001 STAFF DR STE 1AB100  
TINKER AFB OK 73145-3042

HQ USAF/ILMM  
1030 AIR FORCE PENTAGON  
WASHINGTON DC 20330-1030

WR-ALC/TILT  
420 2ND ST STE 100  
ROBINS AFB GA 31098-1640

HQ AFMC/ENPS  
4375 CHIDLAW RD STE 6  
WPAFB OH 45433-5006

OC-ALC/TILUB  
7851 2ND ST STE 200  
TINKER AFB OK 73145-9147

**I. Prerequisites/Assumptions.** These procedures assume that the user has a requirement for Air Force TOs, whether in paper form or digital Indexed Adobe™ Portable Document Format (IPDF) files. They assume that TO Supplements have been eliminated in favor of fully composed RACs as a means to update TOs. They assume the user has (or has access to) the necessary hardware, software and infrastructure to perform a File Transfer Protocol (FTP) download of digital merged baseline TO IPDF files and RAC PDF files from a host server, or has sufficient e-mail capability to receive and decode attachments. Minimum hardware requirements include a 486/33 IBM compatible PC with at least 8 MBytes of RAM, modem or LAN access, laser or ink-jet printer, and a copier. Minimum software requirements include MS Windows 3.x or higher, Adobe Acrobat™ Reader 2.0 or higher, and an e-mail and/or FTP software package (check with the local BNCC for assistance). Use of Windows 95 or higher is recommended. The Adobe Acrobat™ Reader is a free Commercial Off-The-Shelf (COTS) software application that provides the capability to view, navigate through, copy and print PDF files. If stand-alone RAC files are provided to update digital TOs in the field, TODOs must also purchase Adobe Acrobat™ Exchange (about \$200), and requisition the Digital TO (DiTO) Change Management Software program (TO 00-5-1-101) developed by the PDSM Program Office, through the TO System.

**II. Definition of a RAC.** RACs are fully-composed change pages that are prepared to distribute Emergency and Urgent updates to TOs in PDF format. Priority changes will either be held for the next Routine Block Cycle Update (BCU), or upgraded to Urgent if the TCM and Using Command determine that a RAC would be cost-effective. RACs are used in place of operational and safety supplements. In most cases, TOPS will be replaced by page changes issued during a BCU.

1. In a digital environment, RACs can be created within the time constraints inherent in non-routine updates. RACs will include, as a minimum, the TO title page, a new A-Page, at least one data page affected by the non-routine update, and the corresponding backing page (to support paper users).

2. RACs will be identified using the next sequential TO change number. If the next change number has already been assigned to a routine change currently in the publishing cycle “no-change window” (see definition below), then the RAC number will be the next one in sequence, and the supersession notice will specify the RAC’s effectivity.

3. “No Change Window” Procedures. EMERGENCY RACs will be provided within 48 hours of TO Manager/TCM notification of the problem. The supersession notice will specify that the RAC applies to both the current and immediately subsequent TO updates. If the in-work update changes affected pages or paragraphs, a second RAC may have to be issued concurrently with the routine BCU or Change. URGENT RACs will be formatted for and issued concurrently with the in-work BCU or Change.

**III. Creating a RAC.** A RAC will be developed and prepared by a TCM or TO Manager and distributed to TODOs (see paragraph IV). The following steps are involved in creating a RAC:

1. The TCM identifies and/or validates an Emergency or Urgent change requirement.

2. The TCM develops corrective action, documents it on an AFMC Form 252, Publication Change Request, according to AFMCMAN 21-1, has it coordinated and approved IAW AFMCI 21-302, and submits it to the TO Manager.

3. The TO Manager assigns a TO change number to the RAC.

4. The TCM, TO Manager or editorial/production activity converts the baseline TO pages affected by the RAC (including title and “A” pages), to a changeable format:

a. For IPDF TOs:

(1). Download a copy of the baseline IPDF TO file from DLDSS or JCALS to a PC.

(2). Copy and paste the pages affected by the RAC from the baseline IPDF TO to a “change file” in a changeable format (e.g., ASCII text, SGML, ATOS GML, Microsoft Word, WordPerfect, etc.)

b. For TO files already in a changeable (native) format:

(1). Download the baseline TO in its native format to a PC.

(2). Copy and paste pages affected by the RAC from the baseline TO file to a “change file.”

c. For Paper/Negative-only TO Masters:

(1) Obtain negative or paper masters of pages affected by the change.

(2) Convert the content of the pages affected by the RAC to a changeable file. This may be accomplished by electronically scanning the page using Optical Character Recognition (OCR) software, or by retyping the page as a last resort.

5. Make necessary changes to affected pages per AFMC Form 252 instructions.

a. Title page and “A” page format may vary slightly from the current specification or parent TO file’s format (e.g., column alignment, font size, dot leaders, graphic lines, etc.). The title page supersession notice must identify the change as an EMERGENCY or URGENT RAC and indicate which basic date is affected and which change is superseded.

b. Smaller font (9-point minimum) may be used on RAC data pages to accommodate added information on the affected page without impacting the next page. If page integrity cannot be maintained (e.g., if the new information cannot feasibly be incorporated on the affected page), then additional pages should be added as required according to current procedure.

c. Convert changed pages to PDF and save as a RAC file.

6. The TCM and TO Manager review and approve RAC.

7. The TCM or TO Manager electronically merges the PDF RAC file with the IPDF baseline TO file to create a new baseline TO, and relinks (indexes) the new file. The merged IPDF TO is returned to storage as the new master file, along with the stand-alone PDF RAC

file. If applicable, both files are uploaded to an Internet Web server to replace the previous version TO file provided via WWW and allow access to the RAC.

8. Password Protection. When a restricted distribution TO file will be placed on a public access or anonymous FTP Internet site, the file must be password protected. To protect the file, go to “File,” “Save As...,” and click on the “Security” button. The Security dialog box allows specifying passwords for “Open the Document” and “Change Security Options” (the “owner’s” password). The document may be opened using either password; the owner’s password temporarily disables the security settings. Security setting check boxes will prevent “Printing” (not usually used for this application – TODOs may have to print the RAC for paper customers), “Changing the Document” (no changes of any kind, including filling in form fields, allowed), “Selecting Text and Graphics” (allows copying selected text and graphics to a different file), and “Adding or Changing Notes and Form Fields” (allows filling in form fields, but not changing the field itself). After selections are made, click “OK” and retype the passwords in the confirmation box, then click “Save” in the Save As dialog box.

#### **CAUTION**

Passwords are not “embedded” in the file. If you forget the passwords to a document, the file cannot be recovered. Store passwords in a separate secure location in case you forget them.

#### **IV. RAC Notification and Distribution.**

1. Notification. The TCM or TO Manager will notify all affected TODOs of the RAC using any method (usually AUTODIN message) which will meet the timelines listed below. Notification messages will contain the RAC Change Number, TO and Change affected, criticality (Emergency or Urgent), and as applicable, the FTP server location, user name and password required to access the server or the e-mail transmission date and time. For FTP RAC distribution, the notification message will provide guidance on obtaining local assistance with FTP procedures. AIGs or address lists specified by AFMCI 21-302 will be used. TCMs are responsible for developing and maintaining AIGs/address lists for the distribution of notification messages. The responsible TO Manager and OC-ALC/TILUB must be on all AIGs/address lists.

2. Distribution. Any one of five scenarios of RAC distribution may be used, with scenarios using File Transfer Protocol (FTP) being preferred:

(a) The RAC would be merged electronically with the affected baseline TO and both the merged file and the stand-alone RAC file would be loaded on an FTP site. TO Distribution Offices (TODO) would be notified by message of the update, its location, and the user name and password required to access it. TODOs would then use FTP procedures to download either or both of the files, replace any digital copies of the affected TO with the new merged baseline TO, and (if necessary) print the RAC file and make double-sided copies for distribution to paper TO users. TODOs without FTP capability may obtain assistance from the Base Network Control Center (BNCC) to download the files.

#### **NOTES**

Limited distribution TO files will either be password protected, or encrypted and loaded on an access-controlled (domain or user name and password) FTP site.

When using Microsoft™'s Internet Explorer 3.02 and Adobe Acrobat™ Reader 3.0 or higher, PDF files may be downloaded from the WWW (as opposed to opened on the computer screen), using the following procedures: Right click on the file's link, and select "Save Target As" from the pop-up menu. In the Save As dialog box, select a location to which to save the file, and click Save.

(b) For smaller TOs (file size less than 2MB) and a limited user base, the merged TO file and stand-alone RAC file could be distributed to TODOs as e-mail attachments. Message notification would still be done to ensure receipt of the e-mail.

(c) Where communications bandwidth is a concern (for extremely large TO files), only the stand-alone RAC would be loaded to the FTP site, with TODO notification as in (1) above. In this and the following case, TODOs must use Adobe Acrobat™ Exchange, along with the PDSM Program Office-developed Digital TO (DiTO) Change Management Software (TO 00-5-1-101) to merge the RAC with the baseline TO file at their location.

(d) This is the same as (c), except that the stand-alone RAC is distributed via e-mail.

(e) For TODOs not having e-mail or access to the FTP server, priority mail or package services may be used to deliver paper copies of RACs or digital copies on 3.5 inch floppy disk or CD-Recordable (CD-R) disk.

3. Security. Distribution methods must provide adequate security for classified and limited-distribution files. Classified files must be encrypted using an NSA-approved encryption algorithm, while limited-distribution files require an NIST-approved system prior to being hosted on servers. Except for distribution statement "A" documents, files hosted on an FTP server will require either domain restriction and/or user name and password access control. For these reasons, e-mail may not be an acceptable vehicle for transmitting some RACs.

4. Timelines. RAC issue and notification timelines are as follows (see TO 00-5-1, Chapters 4 & 5):

a. EMERGENCY – issue within 48 hours after receipt of an emergency report (within 72 hours if report concerns work stoppage).

b. URGENT – issue within 15 calendar days after receipt of an urgent report.

c. Each base must establish procedures to expedite delivery of notification messages to affected TODOs. In general, EMERGENCY notification messages are sent using IMMEDIATE precedence, and must be delivered within 2 hours of receipt. URGENT notification messages are sent using PRIORITY precedence, requiring delivery as soon as possible during duty hours.

d. When TODOs receive notification of an EMERGENCY RAC, they have 12 hours to download, merge files, print and copy paper as required, and redistribute to their sub-accounts. For URGENT RACs, the period is 24 hours.

## V. Incorporation.

1. TODOs must process RACs as soon as possible to ensure they are posted in time to meet the criteria for Emergency or Urgent updates. When a TODO receives a RAC notification, they will determine which distribution method was used and either download (FTP) or extract from e-mail the merged TO and/or RAC files. They will determine the TO formats (paper or digital) used by their accounts and sub-accounts. If paper copies are required, the RAC file must be printed and double-sided copies distributed to the respective TODAs. If the merged TO was NOT distributed, the TODO must use DiTO and Adobe Exchange to merge the RAC with the affected TO file according to procedures provided in the Quick Start Instructions that are included with the DiTO software. The merged TO then replaces the original files. Two situations could exist with TOs used digitally:

a. TOs accessed directly from a distribution CD-ROM (from a CD tower on a LAN or CD-capable desk-top computer):

(1) The merged TO file (with RAC merged) must be FTP'd or copied to the appropriate server or PC hard drive.

(2) The CD-ROM directory/index must be edited to change the path for that TO from the CD-ROM itself to the server/hard drive where the new file is located.

(3) The CD itself must be marked to indicate that the affected TO on the CD is no longer current.

b. TOs accessed directly from the WWW or copied to a LAN server, floppy disk or PC hard drive prior to use:

(1) TOs accessed from the WWW will have been updated by the TCM/TO Manager.

(2) Affected IPDF TO files on LAN servers, floppy disks or PC hard drives will be overwritten with the merged TO file.

**2.** TODO/TODA account records (ATOMS files) must be updated to indicate the new Change number for the affected TO, and that all affected sub-accounts TOs have been updated.

## DiTO Version 2.0 Software Limitations

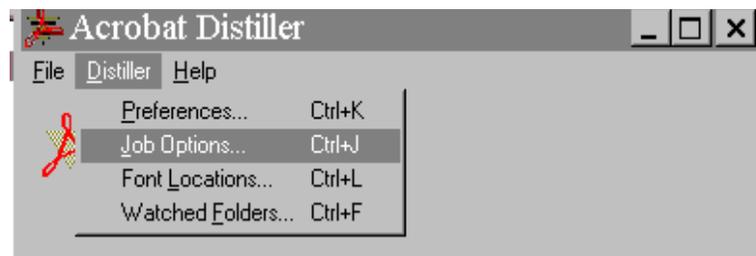
### Limitation 1

**DiTO Version 2.0 reads PDF files which are in an Acrobat 2.1 compatible format only.**

If you are creating a PDF file (for example, a change package) that you want to use with DiTO, it must be created in an Acrobat 2.1 compatible format. When using Acrobat tools version 3.0 or later, such as *Acrobat PDF Writer 3.0* or *Acrobat Distiller 3.0*, choose the option to save your files in an **Acrobat 2.1** format. Following are the procedures for each of these tools:

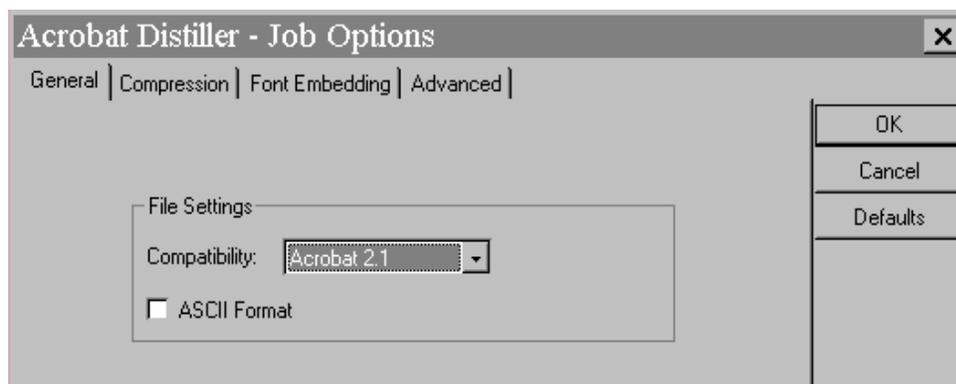
#### Acrobat Distiller 3.0

1. Start *Acrobat Distiller 3.0*.
2. On the menu bar, choose **Distiller** and then choose **Job Options**. (See Figure 61.)



**Figure 61**

3. The *Acrobat Distiller - Job Options* window will open. In the *File Settings* box, choose **Compatibility Acrobat 2.1**. (See Figure 62.)



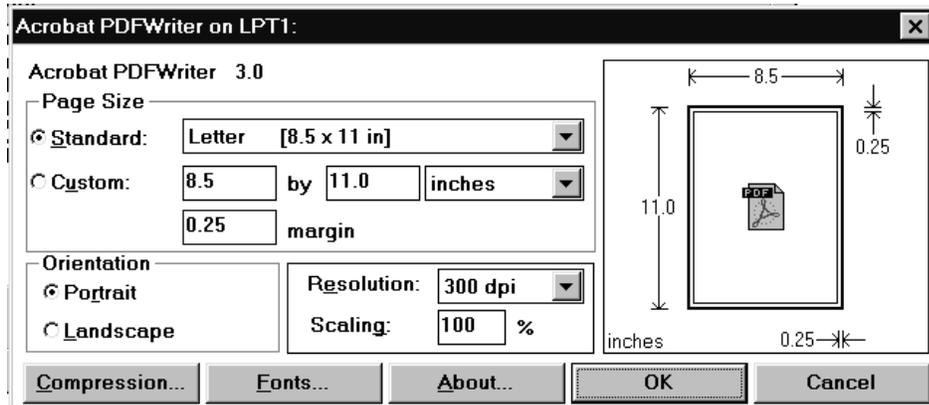
**Figure 62**

4. Click on **OK**
5. Proceed as usual to create your PDF file.

**Limitation 1 (continued)**

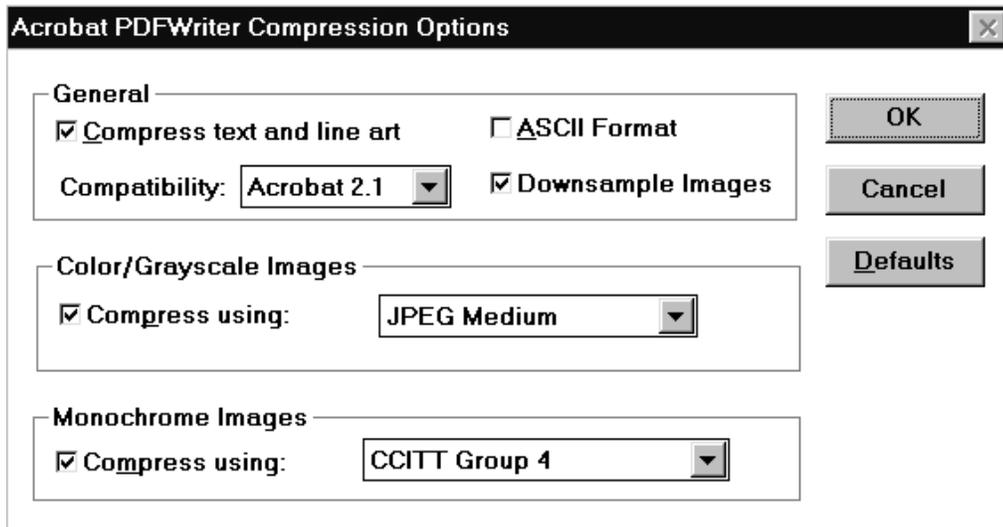
**Acrobat PDFWriter 3.0**

1. Choose printer setup options for *Acrobat PDFWriter 3.0*. The *Acrobat PDFWriter* window will open. (See *Figure 63*.)



**Figure 63**

2. Click on **Compression**. The *Acrobat PDFWriter Compression Options* window will open. (See *Figure 64*.)



3. In the *General* box, choose *Compatibility Acrobat 2.1*. Then Click on **OK**.

4. Click on **OK** in the *Acrobat PDFWriter* window

5. Proceed as usual to create your PDF file.

## Quick Start Instructions (RAC Test Scenario 3 - ALC)

These are quick start instructions for using DiTO 2.0 Change Incorporation Software in *Microsoft Windows 95*. These instructions show the basic steps of merging a PDF change package into a baseline IPDF TO. Refer to the DiTO Users Guide for expanded explanations on these procedures and for information on additional software capability.

Note: Updates to IPDF TOs should be accomplished on a hard drive.

*Overview: The correct IPDF TO and change package are opened in MakeICP. All page change operations are determined automatically by MakeICP and saved as an intelligent change package (.icp) file. IncICP uses the instructions in the .icp file to merge the change package into the baseline TO.*

*In this example, **11691.pdf** represents the baseline IPDF TO and **chg1.pdf** represents the Change Package file. Before getting started, make a backup copy of any baseline IPDF TO that you plan to update. This is a good precaution in case you save the updated IPDF TO with the same filename as the original baseline IPDF TO.*

<b>What You Will Do</b>	<b>Comments</b>
<b><u>Open MakeICP</u></b>	
1) Click the <b>Start</b> button in Windows 95, and then point to <b>Programs</b> , and then <b>DiTO</b>	The DiTO folder (or submenu) will open. Observe the <i>MakeICP</i> program and the <i>IncICP</i> program.
2) Select <b>MakeICP</b> from the DiTO folder	This will start the MakeICP program.
<hr/> <b><u>Using MakeICP</u></b>	
1) From the <i>MakeICP</i> window, Choose <b>File</b> and then choose <b>Open Both Files</b>	
2) Select baseline TO: <ul style="list-style-type: none"><li>• <b>c</b> drive</li><li>• <b>testdata</b> folder</li><li>• File name <b>11691.pdf</b></li></ul>	In the <i>Open Baseline</i> window, locate the baseline IPDF TO file you want to update.
3) Click on <b>Open</b>	A message will appear stating that the program is “Reading page numbers.”  When the program has finished reading the page numbers, the <i>Open Change Package</i> window will open.
4) Select change package: <ul style="list-style-type: none"><li>• <b>c</b> drive</li><li>• <b>testdata</b> folder</li><li>• File name <b>chg1.pdf</b></li></ul>	In the <i>Open Change Package</i> window, locate the change package file that you want to merge into the baseline IPDF TO file.
5) Click on <b>Open</b>	A message will appear stating that the program is “Reading page numbers.”  When finished reading the change package, the <i>Page Numbers</i> window will open with information on the baseline TO pages, the change package pages, and the page operations to be performed.

## What You Will Do

## Comments

NOTE: The change package will contain *backing pages* to the changed pages to accommodate paper users and as such, the *backing pages* may have a different change number than the current change. In this case, a *Problems* window will appear and inform the user that the list of effective pages (LEP) does not recognize the *backing pages* as part of the current change. This condition should be expected. It is a verification of the contents of the change package. Close the *Problems* window and verify that the correct pages are scheduled for replacement or insertion.

---

6) Select the **Close** button to close the page numbers window

This closes the page number windows and leaves the MakeICP window open.

### Save ICP File

1) Choose **File** from the menu bar of MakeICP

2) Choose **Save ICP**

A *MakeICP* window appears indicating that the file has been saved as an .icp file and shows the directory and file name information

3) Click on **OK**

This closes the *MakeICP* message window.

---

### Using InclCP

1) Choose **Process** from the menu bar of MakeICP.

2) Choose **Incorporate Intelligent Change Package**

This opens Acrobat Exchange (if not already opened). After Exchange has been opened, the *Incorporate Intelligent Change Package* window is displayed showing TO Number, Baseline File, Change Number, and Change Package File.

3) Click on **OK**

This merges the change package into the baseline TO.

4) Choose **View** from the menu bar of Exchange and select **Thumbnails and Page**

This presents thumbnails. If you have gray thumbnails, proceed to step 6. If you do not have any gray thumbnails, proceed to step 7.

5) Choose **Document** from the menu bar of Exchange and select **Create All Thumbnails**

Gray thumbnails are replaced with thumbnails representing the proper TO pages.

6) **Verify Information**

**Using the latest A page, verify that the information in the merged IPDF TO is correct.**

**Hint: Print LEP first**

7) Choose **File** from the menu bar of Exchange and select **Save**

Merged file is saved and update is complete.

Continue with Test ID Number 1.3-9 in the test procedures.

Document Number: 98-003  
Volume Number: 2.3  
Version/revision: 1/0  
Security: UNCLASS  
Date: 5 Feb 98

Test Procedures (TP)  
for  
Rapid Action Change (RAC) Implementation

Retail  
Scenario 3 - FTP Merged TO and RAC

prepared by the

Air Force Product Data Modernization (PDSM) Program Office  
4027 Col. Glenn Hwy., Suite 300  
Dayton, OH 45431-1672

Distribution Statement A: Approved for public release; distribution is unlimited.

## Retail Test Procedures

**CAUTION: The data in this test is for testing purposes only and not for operational use.**

### Section I - Test Information and Instructions

The test procedures consist of two volumes: wholesale and retail respectively. Each volume contains four scenarios. Each participating TODO will perform four tests.

<u>Distribution Scenarios</u>	<u>Date</u>	<u>TO</u>	<u>ALC</u>
1. FTP RAC only	7-9 Jan	00-5-18	OC-ALC
2. E-mail RAC only	12-15 Jan	00-5-18	OC-ALC
3. FTP updated TO and RAC	4-6 Feb	1-1-691	WR-ALC
4. E-mail updated TO and RAC	11-13 Feb	1-1-691	WR-ALC

**Note:** Before proceeding with the test, ensure the following criteria are met:

- Adobe Acrobat 3.0 and DiTO are loaded on your computer
- TO 1-1-691 resides in the C:\TESTDATA directory and a backup directory, C:\TESTDATA\BACKUP (This allows original TOs to be restored).
- Ensure FTP utility is available

Upon receipt of the simulated notification message, the TODO will, depending upon the scenario, take action to:

- Download the merged TO file and replace existing digital TO files, and/or
- Download the RAC file, print it on a local printer, make a double-sided copy, and redistribute it to paper TO users for updating their books.

After performing a test procedure, compare the actual result with the expected result and give a rating in the space provided in the last column. Ratings that may be entered in the last column are Pass (P), Pass with Comment (PC), or Fail (F). If a procedure fails, a comment must be given to describe the result. If the procedure passes, then a comment is not necessary as long as the procedure passes unconditionally and no comments are warranted. If the procedure passes but there is some anomaly encountered while performing the task, then a comment should be made. A comment may also be used if the person performing the test feels an enhancement should be made or noted some anomaly unrelated to the procedure.

When a PC or F rating is given, send an E-mail to [support@afcpo.wpafb.af.mil](mailto:support@afcpo.wpafb.af.mil) with RAC TEST in the subject block and then use the following format:

TEST ID:  
PROBLEM:  
RECOMMENDED SOLUTION (IF ANY):

Note: Security issues have not been fully resolved. Do not transfer files other than Distribution Statement A.

Test Information

**Test Personnel:**

	<b>TODO</b>
<b>Name</b>	
<b>Organization</b>	
<b>DSN #</b>	
<b>E-mail address</b>	

TODO Equipment Configuration for Merging the RAC

Operating Environment: \_\_\_\_\_  
(Windows 3.1, Windows 95)

System Memory: \_\_\_\_\_  
(8M, 16M, 32M RAM)

Display Resolution: \_\_\_\_\_  
(640x480, 800x600, 1028x768,...)

Processor Speed: \_\_\_\_\_  
(Pentium 133/166/200/etc.;  
486 33/66/100/etc.)

**Section II - RAC Test Checklist (RETAIL)**

TEST ID	Procedure	Expected Result	(P/F/PC)
2.3-1	<p>Upon receipt of change notification message for <b>simulated</b> RAC (which will be received via e-mail):</p> <ol style="list-style-type: none"> <li>1) Record affected TO number.</li> <li>2) Record TO filename</li> <li>3) Record RAC change number.</li> <li>4) Record RAC filename.</li> <li>5) Record IP address of FTP site</li> <li>6) Record password and USERID.</li> <li>7) Record Date and Time of receipt.</li> </ol>	<p>Change notification is received (<b>simulated</b> AUTODIN message).</p> <p>TO #: _____</p> <p>TO filename: _____</p> <p>RAC change #: _____</p> <p>RAC filename: _____</p> <p>IP address: _____</p> <p>Password: _____</p> <p>USERID: _____</p> <p>Date: _____</p> <p>Time: _____</p>	
2.3-2	<p>Access FTP site: Connect to the FTP site using the IP address, USERID and password listed above.</p>	<p>Connect to FTP site.</p> <p>You should see the TO and RAC file names in the default directory upon gaining access.</p>	
2.3-3	<p>Download IPDF TO file onto PC's hard drive and place in directory C:\TESTDATA.</p> <ol style="list-style-type: none"> <li>1) Record time and number of attempts required to download file.</li> <li>2) Record file size.</li> </ol> <p>NOTE: This download should take around 1 hour plus/minus 20 minutes.</p>	<p>Merged IPDF TO file resident in C:\TESTDATA.</p> <p>Download time: Start time: _____ Finish time: _____ # of attempts: _____ File size: _____ (MB)</p>	
2.3-4	<p>To support sub-accounts using digital TOs - <b>Simulate</b> distribution of merged RAC IPDF TO by updating local file server and <b>simulate</b> sending notification to digital users of RAC update.</p>	<p>Merged IPDF TO containing RAC is now digitally available.</p>	
2.3-5	<p>Download RAC PDF file onto PC's hard drive and place in directory C:\TESTDATA.</p> <ol style="list-style-type: none"> <li>1) Record time and number of attempts required to download file.</li> <li>2) Record file size.</li> </ol>	<p>RAC PDF file resident in C:\TESTDATA.</p> <p>Download time: Start time: _____ Finish time: _____ # of attempts: _____ File size: _____ (MB)</p>	
2.3-6	<p>To support sub-accounts using paper TOs -</p> <ol style="list-style-type: none"> <li>1) Print the RAC PDF file.</li> <li>2) Copy double-sided, ensuring odd-numbered pages are on front and even-numbered pages are on back.</li> <li>3) Inspect paper change package for accuracy.</li> <li>4) Distribute copies to sub-accounts (<b>simulated</b>)</li> <li>5) Record completion date and time.</li> </ol>	<p>Printed change package should resemble the TO pages being replaced.</p> <p>Date: _____</p> <p>Time: _____</p>	

<b>TEST ID</b>	<b>Procedure</b>	<b>Expected Result</b>	<b>(P/F/PC)</b>
2.3-7	End of Test Scenario 3. Make copy of completed Test Procedure and mail original to: AF PDSM PO Attention: Vance Daunheimer 4027 Col. Glenn Hwy, Suite 300 Dayton, OH 45431		

## COMMENTS

Document Number: 98-007  
Volume Number: 1.4  
Version/revision: 1/0  
Security: UNCLASS  
Date: 10 Feb 98

Test Procedures (TP)  
for  
Rapid Action Change (RAC) Implementation

Wholesale  
Scenario 4 - E-Mail Merged TO and RAC

prepared by the

Air Force Product Data Modernization (PDSM) Program Office  
4027 Col. Glenn Hwy., Suite 300  
Dayton, OH 45431-1672

Distribution Statement A: Approved for public release; distribution is unlimited.

# Wholesale Test Procedures

**CAUTION: The data in this test is for testing purposes only and not for operational use.**

## **Section I - Test Information and Instructions**

The test procedures consist of two volumes: Volume 1 for wholesale and Volume 2 for retail. Each volume contains four scenarios. Each ALC will perform two tests as depicted in the following table:

<b><u>Distribution Scenarios</u></b>	<b><u>Date</u></b>	<b><u>TO</u></b>	<b><u>ALC</u></b>
1. FTP RAC only	7-9 Jan	00-5-18	OC-ALC
2. E-mail RAC only	12-15 Jan	00-5-18	OC-ALC
3. FTP updated TO and RAC	4-6 Feb	1-1-691	WR-ALC
4. E-mail updated TO and RAC	11-13 Feb	1-1-691	WR-ALC

The TO Manager will ensure completion of the wholesale test procedure documentation.

The TO Manager/TCM will:

- Develop a TO update based on the notification of a problem.
- Format and number the TO update as a RAC (like a normal TO Change).
- Convert RAC to a non-indexed PDF file.
- Merge the digital RAC file into the affected TO's baseline file using Acrobat Exchange and DiTO software. The digital RAC file itself and the updated (merged) baseline TO file will either be uploaded to a File Transfer Protocol (FTP) server or attached to an E-mail for transmission to appropriate TODOs, depending on the scenario.
- Simulate notifying TODOs by AUTODIN message that a RAC was published and how it will be distributed; via FTP download, or by E-mail attachment. The message notification will include the IP address, USERID and password for the FTP server where the RAC is located, or indicate the date and time when the digital RAC file was E-mailed.

After performing a test procedure, compare the actual result with the expected result and give a rating in the space provided in the last column. Ratings that may be entered in the last column are Pass (P), Pass with Comment (PC), or Fail (F). If a procedure fails, a comment must be given to describe the result. If the procedure passes, then a comment is not necessary as long as the procedure passes unconditionally and no comments are warranted. If the procedure passes but there is some anomaly encountered while performing the task, then a comment should be made. A comment may also be used if the person performing the test feels an enhancement should be made or noted some anomaly unrelated to the procedure.

When a PC or F rating is given, send an E-mail to *support@afcpo.wpafb.af.mil* with RAC TEST in the subject block and then use the following format:

TEST ID:  
PROBLEM:  
RECOMMENDED SOLUTION (IF ANY):

Note: Security issues have not been fully resolved. Do not transfer files other than Distribution Statement A.

Test Information

**Test Personnel:**

	<b>Technical Order Manager</b>	<b>Technical Content Manager</b>	<b>Editor</b>	<b>System Administrator</b>	<b>Other_____</b>
<b>Name</b>					
<b>Organization</b>					
<b>DSN #</b>					
<b>E-mail address</b>					

Test Platform Configuration for RAC Development

Operating Environment: \_\_\_\_\_  
(Windows 3.1, Windows 95)

System Memory: \_\_\_\_\_  
(8M, 16M, 32M RAM)

Display Resolution: \_\_\_\_\_  
(640x480, 800x600, 1028x768...)

Processor Speed: \_\_\_\_\_  
(Pentium 133/166/200/etc.;  
486 33/66/100/etc.)

**Section II - RAC Test Checklist (WHOLESALE)**

TEST ID	Procedure	Expected Result	(P/F/PC)	Name of Tester
1.4-1	<p>Upon receipt of the change notification message (which was part of the e-mail these test procedures were attached to):</p> <p>1) Record the notification improvement report number. 2) Record data and time you received notification of the change request.</p>	<p>Simulated change request message is received.</p> <p>Improvement report #: _____ Date: _____ Time: _____(hh:mm)</p>		
1.4-2	<p>From the change request message record the affected TO number.</p>	<p>The message should state the TO Number. TO Number _____</p>		
1.4-3	<p>Evaluate the requested change.</p>	<p>Approved Change</p>		
1.4-4	<p>Simulate obtaining a change number from the TO Manager. Record the change number to be assigned to the RAC package.</p>	<p>Change Number _____</p>		
1.4-5	<p>TCM develops verbatim wording for change package.</p>	<p>Verbatim wording developed.</p>		
1.4-6	<p>Format the change content into a change package. Refer to Interim Practices and Procedures Memorandum (attachment 1).</p> <p><b>Ensure backing pages are included in the change package.</b></p> <p>Record time required to format.</p>	<p>RAC package is successfully generated.</p> <p>Format time: _____(min)</p>		
1.4-7	<p>Convert change package to Acrobat 2.1 PDF compatible format (see attachment 2). Place in c:\testdata directory as chg1-s4.pdf. Record completion time.</p>	<p>Time: _____(hh:mm)</p>		
1.4-8	<p>Use DiTO 2.0 and the Quick Start Instructions (see attachment 3) to merge the RAC PDF change file into the baseline IPDF TO creating a new updated baseline TO.</p> <p>Baseline TO = c:\testdata\11691-s4.pdf Change Package = c:\testdata\chg1-s4.pdf</p> <p>Record time required to merge RAC file into baseline IPDF TO.</p>	<p>Time to merge:</p> <p>Start time: _____</p> <p>Finish time: _____</p>		

TEST ID	Procedure	Expected Result	(P/F/PC)	Name of Tester
1.4-9	Generate a notification message. Include the following information in the notification message: 1) Notice that a <b>simulated</b> Emergency Rapid Action Change has been published. 2) Affected TO number and change number: Change 1 to T.O. 1-1-691 3) File names of the IPDF TO and RAC: IDPF TO file: 11691-s4.pdf RAC file: chg1-s4.pdf 4) Number to call and POC in case of any technical problems.  Record completion time.	Time: _____(hh:mm)		
1.4-10	<b>Simulate</b> sending notification message to TODOs via the AUTODIN System.  Record completion time	Time: _____(hh:mm)		
1.4-11	Send notification message to TODOs via e-mail as prepared in test procedure 1.4-9. Include merged IPDF TO file (11691-s4.pdf) and RAC file (chg1-s4.pdf) as attachments. Enter RAC TEST - Scenario 4 in E-mail subject line. Send RAC e-mail to the following addresses:  cbillingsley@ffo.afres.af.mil revans@ohsgh.ang.af.mil grossj@445clsspo.b10smtp.wpafb.af.mil lemkej@88ABW.WPAFB.AF.MIL roosevelt.sutton@langley.af.mil daunhev@afcpo.wpafb.af.mil  Record completion time	Time: _____(hh:mm)		
1.4-12	End of Test Scenario 4. Make copy of completed Test Procedure and mail original to: AF PDSM PO Attn: Vance Daunheimer 4027 Col. Glenn Hwy, Suite 300 Dayton, OH 45431			

## COMMENTS

MEMORANDUM FOR SEE DISTRIBUTION

FROM: Det 2 ESC/AV-2  
4027 Col Glenn Hwy, Ste 300  
Dayton OH 45431-1672

SUBJECT: Interim Practices and Procedures for Use of Rapid Action Changes (RAC) to Update Indexed Adobe™ Portable Document Format (IPDF) Technical Order (TO) Files and Associated Paper Copies of Affected TOs

1. **AUTHORITY:** HQ AFMC/EN has delegated responsibility for developing AFMC TO System Business Practices and Procedures to the Air Force Product Data Systems Modernization (PDSM) Program Office, Det 2 ESC/AV-2. In addition, the Air Force Centralized TO Management (CTOM) Committee, through HQ USAF/ILMM, has tasked AV-2 to manage a special project to provide digitized Methods and Procedures TOs (MPTOs) to users on multiple media, and to develop the necessary interim Air Force Practices and Procedures to enable this action. This memorandum is authority to use the attached procedures in conjunction with, or where specified, in lieu of those published in 00-5-series TOs and AFMCMAN 21-1 when using digitized TOs.

2. **PURPOSE:** The Department of Defense has directed the Air Force to move toward an “all-digital” environment by CY2002. As part of this effort, we are converting existing paper TOs into Indexed Adobe™ Portable Document Format (IPDF) files.

a. We have developed dual processes to sustain these digitized TOs; Block Cycle Updates (BCU) for most updates and RACs to provide Urgent or Emergency updates.

b. These two processes are designed to digitize and improve the TO update process, by: (1) reducing production frequency by controlling the intervals of routine updates; (2) reducing time, manpower and production costs through digital update generation, transmittal, and use; (3) reducing postal costs; (4) reducing the time and manpower to post updates; (5) improving the accuracy of TO posting; and (6) enhancing TO usability.

3. **OVERVIEW:**

a. Block Cycle Updates are synchronized, concurrent updates to all TOs in a set or group of TOs distributed on a single medium (e.g., CD-ROM). The specific grouping of TOs and BCU frequency will be determined by the Single Manager (SM). The SM may delegate this responsibility to TO Manager or Technical Content Manager (TCM) for the TOs. All routine and many priority and urgent changes, corrections, and enhancements will be handled using the BCU process. BCUs will produce an updated digital TO file, with any pending updates merged into the baseline TO file (no posting action required by users). The updated file will simply replace the old file. If multiple TO files are being distributed on a single medium (i.e., Compact Disk-Read Only Memory – CD-ROM), then all TOs on the disk must be on the same BCU cycle. Specific BCU procedures are not included in this memorandum.

b. RACs are fully-composed change packages, just like current TO Changes. RACs are used to provide Urgent or Emergency updates between BCU periods, and replace operational and safety supplements. The composed RAC package is converted to a Portable Document Format (PDF) file to enable merger with the baseline TO's Indexed PDF (IPDF) file. Any one of five distribution scenarios, discussed in the attached procedures, could be used.

4. Point of contact for the AF PDSM Program Office is Ms Pamela Sutton, AV-2P, DSN 787-3085, Comm: (937) 427-2295, ext 340. E-mail is [suttonp@afcpo.wpafb.af.mil](mailto:suttonp@afcpo.wpafb.af.mil).

GAIL P. BROWN  
Deputy Single Manager  
Air Force PDSM Program Office

Attachment  
Interim Rapid Action Change Procedures

cc: See Distribution:

## **DISTRIBUTION**

### **ACTION:**

OC-ALC/TILDT  
3001 STAFF DR STE 1A100  
TINKER AFB OK 73145-3042

HQ USAF/ILMM  
1030 AIR FORCE PENTAGON  
WASHINGTON DC 20330-1030

WR-ALC/TILT  
420 2ND ST STE 100  
ROBINS AFB GA 31098-1640

HQ AFMC/ENPS  
4375 CHIDLAW RD STE 6  
WPAFB OH 45433-5006

OC-ALC/TILUB  
7851 2ND ST STE 200  
TINKER AFB OK 73145-9147

**I. Prerequisites/Assumptions.** These procedures assume that the user has a requirement for Air Force TOs, whether in paper form or digital Indexed Adobe™ Portable Document Format (IPDF) files. They assume that TO Supplements have been eliminated in favor of fully composed RACs as a means to update TOs. They assume the user has (or has access to) the necessary hardware, software and infrastructure to perform a File Transfer Protocol (FTP) download of digital merged baseline TO IPDF files and RAC PDF files from a host server, or has sufficient e-mail capability to receive and decode attachments. Minimum hardware requirements include a 486/33 IBM compatible PC with at least 8 MBytes of RAM, modem or LAN access, laser or ink-jet printer, and a copier. Minimum software requirements include MS Windows 3.x or higher, Adobe Acrobat™ Reader 2.0 or higher, and an e-mail and/or FTP software package (check with the local BNCC for assistance). Use of Windows 95 or higher is recommended. The Adobe Acrobat™ Reader is a free Commercial Off-The-Shelf (COTS) software application that provides the capability to view, navigate through, copy and print PDF files. If stand-alone RAC files are provided to update digital TOs in the field, TODOs must also purchase Adobe Acrobat™ Exchange (about \$200), and requisition the Digital TO (DiTO) Change Management Software program (TO 00-5-1-101) developed by the PDSM Program Office, through the TO System.

**II. Definition of a RAC.** RACs are fully-composed change pages that are prepared to distribute Emergency and Urgent updates to TOs in PDF format. Priority changes will either be held for the next Routine Block Cycle Update (BCU), or upgraded to Urgent if the TCM and Using Command determine that a RAC would be cost-effective. RACs are used in place of operational and safety supplements. In most cases, TOPS will be replaced by page changes issued during a BCU.

1. In a digital environment, RACs can be created within the time constraints inherent in non-routine updates. RACs will include, as a minimum, the TO title page, a new A-Page, at least one data page affected by the non-routine update, and the corresponding backing page (to support paper users).

2. RACs will be identified using the next sequential TO change number. If the next change number has already been assigned to a routine change currently in the publishing cycle “no-change window” (see definition below), then the RAC number will be the next one in sequence, and the supersession notice will specify the RAC’s effectivity.

3. “No Change Window” Procedures. EMERGENCY RACs will be provided within 48 hours of TO Manager/TCM notification of the problem. The supersession notice will specify that the RAC applies to both the current and immediately subsequent TO updates. If the in-work update changes affected pages or paragraphs, a second RAC may have to be issued concurrently with the routine BCU or Change. URGENT RACs will be formatted for and issued concurrently with the in-work BCU or Change.

**III. Creating a RAC.** A RAC will be developed and prepared by a TCM or TO Manager and distributed to TODOs (see paragraph IV). The following steps are involved in creating a RAC:

1. The TCM identifies and/or validates an Emergency or Urgent change requirement.

2. The TCM develops corrective action, documents it on an AFMC Form 252, Publication Change Request, according to AFMCMAN 21-1, has it coordinated and approved IAW AFMCI 21-302, and submits it to the TO Manager.

3. The TO Manager assigns a TO change number to the RAC.

4. The TCM, TO Manager or editorial/production activity converts the baseline TO pages affected by the RAC (including title and “A” pages), to a changeable format:

a. For IPDF TOs:

(1). Download a copy of the baseline IPDF TO file from DLDSS or JCALS to a PC.

(2). Copy and paste the pages affected by the RAC from the baseline IPDF TO to a “change file” in a changeable format (e.g., ASCII text, SGML, ATOS GML, Microsoft Word, WordPerfect, etc.)

b. For TO files already in a changeable (native) format:

(1). Download the baseline TO in its native format to a PC.

(2). Copy and paste pages affected by the RAC from the baseline TO file to a “change file.”

c. For Paper/Negative-only TO Masters:

(1) Obtain negative or paper masters of pages affected by the change.

(2) Convert the content of the pages affected by the RAC to a changeable file. This may be accomplished by electronically scanning the page using Optical Character Recognition (OCR) software, or by retyping the page as a last resort.

5. Make necessary changes to affected pages per AFMC Form 252 instructions.

a. Title page and “A” page format may vary slightly from the current specification or parent TO file’s format (e.g., column alignment, font size, dot leaders, graphic lines, etc.). The title page supersession notice must identify the change as an EMERGENCY or URGENT RAC and indicate which basic date is affected and which change is superseded.

b. Smaller font (9-point minimum) may be used on RAC data pages to accommodate added information on the affected page without impacting the next page. If page integrity cannot be maintained (e.g., if the new information cannot feasibly be incorporated on the affected page), then additional pages should be added as required according to current procedure.

c. Convert changed pages to PDF and save as a RAC file.

6. The TCM and TO Manager review and approve RAC.

7. The TCM or TO Manager electronically merges the PDF RAC file with the IPDF baseline TO file to create a new baseline TO, and relinks (indexes) the new file. The merged IPDF TO is returned to storage as the new master file, along with the stand-alone PDF RAC

file. If applicable, both files are uploaded to an Internet Web server to replace the previous version TO file provided via WWW and allow access to the RAC.

8. Password Protection. When a restricted distribution TO file will be placed on a public access or anonymous FTP Internet site, the file must be password protected. To protect the file, go to “File,” “Save As...,” and click on the “Security” button. The Security dialog box allows specifying passwords for “Open the Document” and “Change Security Options” (the “owner’s” password). The document may be opened using either password; the owner’s password temporarily disables the security settings. Security setting check boxes will prevent “Printing” (not usually used for this application – TODOs may have to print the RAC for paper customers), “Changing the Document” (no changes of any kind, including filling in form fields, allowed), “Selecting Text and Graphics” (allows copying selected text and graphics to a different file), and “Adding or Changing Notes and Form Fields” (allows filling in form fields, but not changing the field itself). After selections are made, click “OK” and retype the passwords in the confirmation box, then click “Save” in the Save As dialog box.

#### **CAUTION**

Passwords are not “embedded” in the file. If you forget the passwords to a document, the file cannot be recovered. Store passwords in a separate secure location in case you forget them.

#### **IV. RAC Notification and Distribution.**

1. Notification. The TCM or TO Manager will notify all affected TODOs of the RAC using any method (usually AUTODIN message) which will meet the timelines listed below. Notification messages will contain the RAC Change Number, TO and Change affected, criticality (Emergency or Urgent), and as applicable, the FTP server location, user name and password required to access the server or the e-mail transmission date and time. For FTP RAC distribution, the notification message will provide guidance on obtaining local assistance with FTP procedures. AIGs or address lists specified by AFMCI 21-302 will be used. TCMs are responsible for developing and maintaining AIGs/address lists for the distribution of notification messages. The responsible TO Manager and OC-ALC/TILUB must be on all AIGs/address lists.

2. Distribution. Any one of five scenarios of RAC distribution may be used, with scenarios using File Transfer Protocol (FTP) being preferred:

(a) The RAC would be merged electronically with the affected baseline TO and both the merged file and the stand-alone RAC file would be loaded on an FTP site. TO Distribution Offices (TODO) would be notified by message of the update, its location, and the user name and password required to access it. TODOs would then use FTP procedures to download either or both of the files, replace any digital copies of the affected TO with the new merged baseline TO, and (if necessary) print the RAC file and make double-sided copies for distribution to paper TO users. TODOs without FTP capability may obtain assistance from the Base Network Control Center (BNCC) to download the files.

#### **NOTES**

Limited distribution TO files will either be password protected, or encrypted and loaded on an access-controlled (domain or user name and password) FTP site.

When using Microsoft™'s Internet Explorer 3.02 and Adobe Acrobat™ Reader 3.0 or higher, PDF files may be downloaded from the WWW (as opposed to opened on the computer screen), using the following procedures: Right click on the file's link, and select "Save Target As" from the pop-up menu. In the Save As dialog box, select a location to which to save the file, and click Save.

(b) For smaller TOs (file size less than 2MB) and a limited user base, the merged TO file and stand-alone RAC file could be distributed to TODOs as e-mail attachments. Message notification would still be done to ensure receipt of the e-mail.

(c) Where communications bandwidth is a concern (for extremely large TO files), only the stand-alone RAC would be loaded to the FTP site, with TODO notification as in (1) above. In this and the following case, TODOs must use Adobe Acrobat™ Exchange, along with the PDSM Program Office-developed Digital TO (DiTO) Change Management Software (TO 00-5-1-101) to merge the RAC with the baseline TO file at their location.

(d) This is the same as (c), except that the stand-alone RAC is distributed via e-mail.

(e) For TODOs not having e-mail or access to the FTP server, priority mail or package services may be used to deliver paper copies of RACs or digital copies on 3.5 inch floppy disk or CD-Recordable (CD-R) disk.

3. Security. Distribution methods must provide adequate security for classified and limited-distribution files. Classified files must be encrypted using an NSA-approved encryption algorithm, while limited-distribution files require an NIST-approved system prior to being hosted on servers. Except for distribution statement "A" documents, files hosted on an FTP server will require either domain restriction and/or user name and password access control. For these reasons, e-mail may not be an acceptable vehicle for transmitting some RACs.

4. Timelines. RAC issue and notification timelines are as follows (see TO 00-5-1, Chapters 4 & 5):

a. EMERGENCY – issue within 48 hours after receipt of an emergency report (within 72 hours if report concerns work stoppage).

b. URGENT – issue within 15 calendar days after receipt of an urgent report.

c. Each base must establish procedures to expedite delivery of notification messages to affected TODOs. In general, EMERGENCY notification messages are sent using IMMEDIATE precedence, and must be delivered within 2 hours of receipt. URGENT notification messages are sent using PRIORITY precedence, requiring delivery as soon as possible during duty hours.

d. When TODOs receive notification of an EMERGENCY RAC, they have 12 hours to download, merge files, print and copy paper as required, and redistribute to their sub-accounts. For URGENT RACs, the period is 24 hours.

## **V. Incorporation.**

1. TODOs must process RACs as soon as possible to ensure they are posted in time to meet the criteria for Emergency or Urgent updates. When a TODO receives a RAC notification, they will determine which distribution method was used and either download (FTP) or extract from e-mail the merged TO and/or RAC files. They will determine the TO formats (paper or digital) used by their accounts and sub-accounts. If paper copies are required, the RAC file must be printed and double-sided copies distributed to the respective TODAs. If the merged TO was NOT distributed, the TODO must use DiTO and Adobe Exchange to merge the RAC with the affected TO file according to procedures provided in the Quick Start Instructions that are included with the DiTO software. The merged TO then replaces the original files. Two situations could exist with TOs used digitally:

a. TOs accessed directly from a distribution CD-ROM (from a CD tower on a LAN or CD-capable desk-top computer):

(1) The merged TO file (with RAC merged) must be FTP'd or copied to the appropriate server or PC hard drive.

(2) The CD-ROM directory/index must be edited to change the path for that TO from the CD-ROM itself to the server/hard drive where the new file is located.

(3) The CD itself must be marked to indicate that the affected TO on the CD is no longer current.

b. TOs accessed directly from the WWW or copied to a LAN server, floppy disk or PC hard drive prior to use:

(1) TOs accessed from the WWW will have been updated by the TCM/TO Manager.

(2) Affected IPDF TO files on LAN servers, floppy disks or PC hard drives will be overwritten with the merged TO file.

**2.** TODO/TODA account records (ATOMS files) must be updated to indicate the new Change number for the affected TO, and that all affected sub-accounts TOs have been updated.

## DiTO Version 2.0 Software Limitations

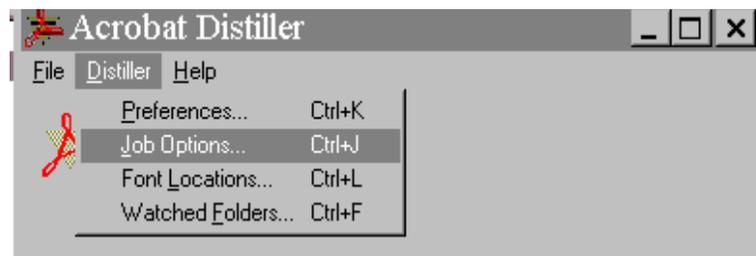
### Limitation 1

**DiTO Version 2.0 reads PDF files which are in an Acrobat 2.1 compatible format only.**

If you are creating a PDF file (for example, a change package) that you want to use with DiTO, it must be created in an Acrobat 2.1 compatible format. When using Acrobat tools version 3.0 or later, such as *Acrobat PDF Writer 3.0* or *Acrobat Distiller 3.0*, choose the option to save your files in an **Acrobat 2.1** format. Following are the procedures for each of these tools:

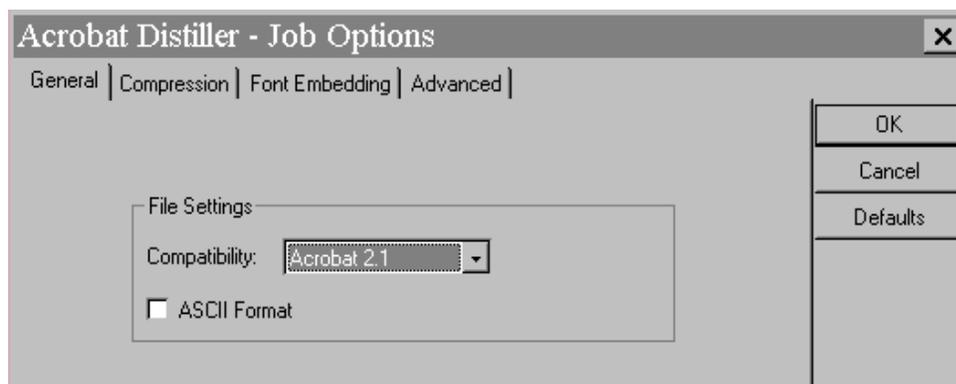
#### Acrobat Distiller 3.0

1. Start *Acrobat Distiller 3.0*.
2. On the menu bar, choose **Distiller** and then choose **Job Options**. (See Figure 61.)



**Figure 61**

3. The *Acrobat Distiller - Job Options* window will open. In the *File Settings* box, choose **Compatibility Acrobat 2.1**. (See Figure 62.)



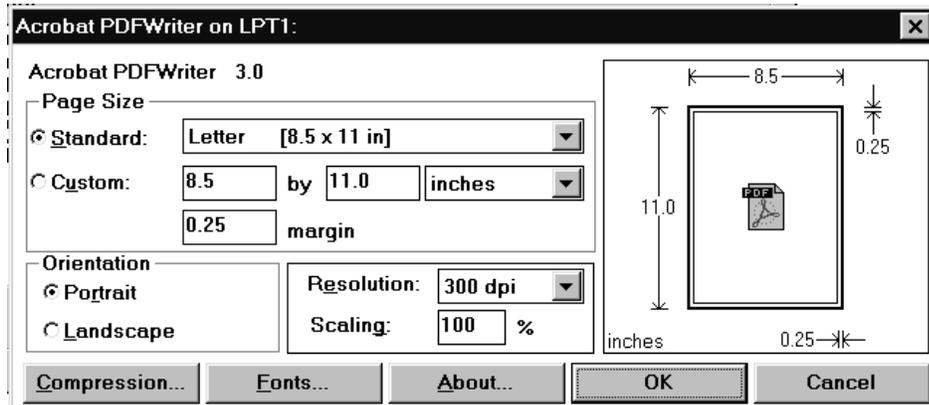
**Figure 62**

4. Click on **OK**
5. Proceed as usual to create your PDF file.

**Limitation 1 (continued)**

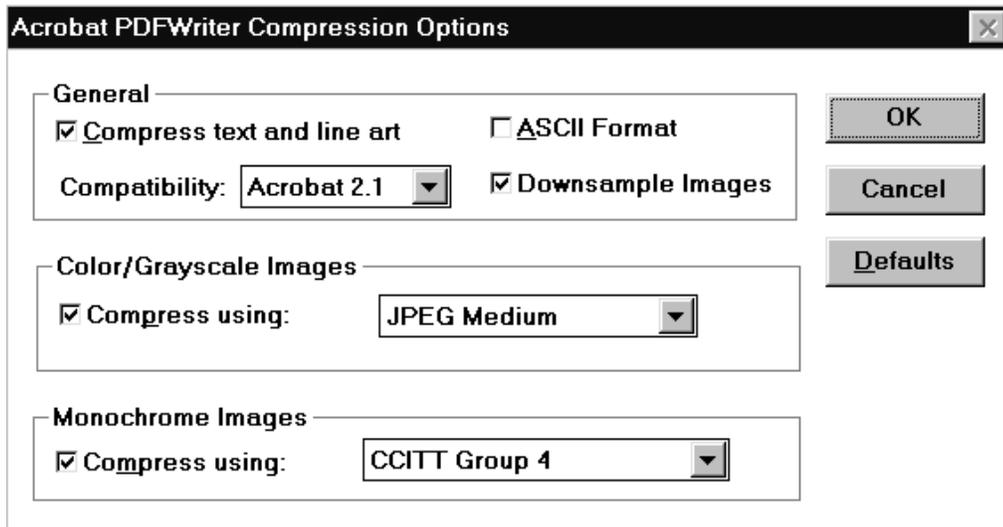
**Acrobat PDFWriter 3.0**

1. Choose printer setup options for *Acrobat PDFWriter 3.0*. The *Acrobat PDFWriter* window will open. (See *Figure 63*.)



**Figure 63**

2. Click on **Compression**. The *Acrobat PDFWriter Compression Options* window will open. (See *Figure 64*.)



3. In the *General* box, choose *Compatibility Acrobat 2.1*. Then Click on **OK**.

4. Click on **OK** in the *Acrobat PDFWriter* window

5. Proceed as usual to create your PDF file.

## Quick Start Instructions (RAC Test Scenario 4 - ALC)

These are quick start instructions for using DiTO 2.0 Change Incorporation Software in *Microsoft Windows 95*. These instructions show the basic steps of merging a PDF change package into a baseline IPDF TO. Refer to the DiTO Users Guide for expanded explanations on these procedures and for information on additional software capability.

Note: Updates to IPDF TOs should be accomplished on a hard drive.

*Overview: The correct IPDF TO and change package are opened in MakeICP. All page change operations are determined automatically by MakeICP and saved as an intelligent change package (.icp) file. IncICP uses the instructions in the .icp file to merge the change package into the baseline TO.*

*In this example, **11691-s4.pdf** represents the baseline IPDF TO and **chg1-s4.pdf** represents the Change Package file. Before getting started, make a backup copy of any baseline IPDF TO that you plan to update. This is a good precaution in case you save the updated IPDF TO with the same filename as the original baseline IPDF TO.*

<b>What You Will Do</b>	<b>Comments</b>
<b><u>Open MakeICP</u></b>	
1) Click the <b>Start</b> button in Windows 95, and then point to <b>Programs</b> , and then <b>DiTO</b>	The DiTO folder (or submenu) will open. Observe the <i>MakeICP</i> program and the <i>IncICP</i> program.
2) Select <b>MakeICP</b> from the DiTO folder	This will start the MakeICP program.
<hr/> <b><u>Using MakeICP</u></b>	
1) From the <i>MakeICP</i> window, Choose <b>File</b> and then choose <b>Open Both Files</b>	
2) Select baseline TO: <ul style="list-style-type: none"><li>• <b>c</b> drive</li><li>• <b>testdata</b> folder</li><li>• File name <b>11691-s4.pdf</b></li></ul>	In the <i>Open Baseline</i> window, locate the baseline IPDF TO file you want to update.
3) Click on <b>Open</b>	A message will appear stating that the program is “Reading page numbers.”  When the program has finished reading the page numbers, the <i>Open Change Package</i> window will open.
4) Select change package: <ul style="list-style-type: none"><li>• <b>c</b> drive</li><li>• <b>testdata</b> folder</li><li>• File name <b>chg1-s4.pdf</b></li></ul>	In the <i>Open Change Package</i> window, locate the change package file that you want to merge into the baseline IPDF TO file.
5) Click on <b>Open</b>	A message will appear stating that the program is “Reading page numbers.”  When finished reading the change package, the <i>Page Numbers</i> window will open with information on the baseline TO pages, the change package pages,

## What You Will Do

## Comments

and the page operations to be performed.

NOTE: The change package will contain *backing pages* to the changed pages to accommodate paper users and as such, the *backing pages* may have a different change number than the current change. In this case, a *Problems* window will appear and inform the user that the list of effective pages (LEP) does not recognize the *backing pages* as part of the current change. This condition should be expected. It is a verification of the contents of the change package. Close the *Problems* window and verify that the correct pages are scheduled for replacement or insertion.

---

6) Select the **Close** button to close the page numbers window

This closes the page number windows and leaves the MakeICP window open.

### Save ICP File

1) Choose **File** from the menu bar of MakeICP

2) Choose **Save ICP**

A *MakeICP* window appears indicating that the file has been saved as an .icp file and shows the directory and file name information

3) Click on **OK**

This closes the *MakeICP* message window.

---

### Using InclCP

1) Choose **Process** from the menu bar of MakeICP.

2) Choose **Incorporate Intelligent Change Package**

This opens Acrobat Exchange (if not already opened). After Exchange has been opened, the *Incorporate Intelligent Change Package* window is displayed showing TO Number, Baseline File, Change Number, and Change Package File.

3) Click on **OK**

This merges the change package into the baseline TO.

4) Choose **View** from the menu bar of Exchange and select **Thumbnails and Page**

This presents thumbnails. If you have gray thumbnails, proceed to step 6. If you do not have any gray thumbnails, proceed to step 7.

5) Choose **Document** from the menu bar of Exchange and select **Create All Thumbnails**

Gray thumbnails are replaced with thumbnails representing the proper TO pages.

6) **Verify Information**

**Using the latest A page, verify that the information in the merged IPDF TO is correct.**

**Hint: Print LEP first**

7) Choose **File** from the menu bar of Exchange and select **Save**

Merged file is saved and update is complete.

Continue with Test ID Number 1.4-9 in the test procedures.

Document Number: 98-008  
Volume Number: 2.4  
Version/revision: 1/0  
Security: UNCLASS  
Date: 11 Feb 98

Test Procedures (TP)  
for  
Rapid Action Change (RAC) Implementation

Retail  
Scenario 4 - E-Mail Merged TO and RAC

prepared by the

Air Force Product Data Modernization (PDSM) Program Office  
4027 Col. Glenn Hwy., Suite 300  
Dayton, OH 45431-1672

Distribution Statement A: Approved for public release; distribution is unlimited.

## Retail Test Procedures

**CAUTION: The data in this test is for testing purposes only and not for operational use.**

### Section I - Test Information and Instructions

The test procedures consist of two volumes: wholesale and retail respectively. Each volume contains four scenarios. Each participating TODO will perform four tests.

<u>Distribution Scenarios</u>	<u>Date</u>	<u>TO</u>	<u>ALC</u>
1. FTP RAC only	7-9 Jan	00-5-18	OC-ALC
2. E-mail RAC only	12-15 Jan	00-5-18	OC-ALC
3. FTP updated TO and RAC	4-6 Feb	1-1-691	WR-ALC
4. E-mail updated TO and RAC	11-13 Feb	1-1-691	WR-ALC

**Note:** Before proceeding with the test, ensure the following criteria are met:

- Adobe Acrobat 3.0 and DiTO are loaded on your computer
- TO 1-1-691 resides in the C:\TESTDATA directory and a backup directory, C:\TESTDATA\BACKUP (This allows original TOs to be restored).
- Ensure FTP utility is available

Upon receipt of the simulated notification message, the TODO will, depending upon the scenario, take action to:

- Download the merged TO file and replace existing digital TO files, and
- Download the RAC file, print it on a local printer, make a double-sided copy, and distribute it to paper TO users for updating their books.

After performing a test procedure, compare the actual result with the expected result and give a rating in the space provided in the last column. Ratings that may be entered in the last column are Pass (P), Pass with Comment (PC), or Fail (F). If a procedure fails, a comment must be given to describe the result. If the procedure passes, then a comment is not necessary as long as the procedure passes unconditionally and no comments are warranted. If the procedure passes but there is some anomaly encountered while performing the task, then a comment should be made. A comment may also be used if the person performing the test feels an enhancement should be made or noted some anomaly unrelated to the procedure.

When a PC or F rating is given, send an E-mail to [support@afcpo.wpafb.af.mil](mailto:support@afcpo.wpafb.af.mil) with RAC TEST in the subject block and then use the following format:

TEST ID:  
PROBLEM:  
RECOMMENDED SOLUTION (IF ANY):

Note: Security issues have not been fully resolved. Do not transfer files other than Distribution Statement A.

Test Information

**Test Personnel:**

	<b>TODO</b>
<b>Name</b>	
<b>Organization</b>	
<b>DSN #</b>	
<b>E-mail address</b>	

TODO Equipment Configuration for Merging the RAC

Operating Environment: \_\_\_\_\_  
(Windows 3.1, Windows 95)

System Memory: \_\_\_\_\_  
(8M, 16M, 32M RAM)

Display Resolution: \_\_\_\_\_  
(640x480, 800x600, 1028x768,...)

Processor Speed: \_\_\_\_\_  
(Pentium 133/166/200/etc.;  
486 33/66/100/etc.)

**Section II - RAC Test Checklist (RETAIL)**

TEST ID	Procedure	Expected Result	(P/F/PC)
2.4-1	Upon receipt of change notification message for <b>simulated</b> RAC (which will be received via e-mail): <ol style="list-style-type: none"> <li>1) Record affected TO number.</li> <li>2) Record TO filename</li> <li>3) Record RAC change number.</li> <li>4) Record RAC filename.</li> <li>5) Record Date and Time of receipt.</li> </ol>	Change notification is received ( <b>simulated</b> AUTODIN message). TO #: _____ TO filename: _____ RAC change #: _____ RAC filename: _____ Date: _____ Time: _____	
2.4-2	Extract attached e-mail file for the updated IPDF TO onto PC's hard drive and place in directory C:\TESTDATA.	Merged IPDF TO file now resident in C:\TESTDATA. Download time: Start time: _____ Finish time: _____ File size: _____ (MB)	
2.4-3	Extract attached e-mail file for the RAC package onto PC's hard drive and place in directory C:\TESTDATA.	RAC file now resident in C:\TESTDATA. Download time: Start time: _____ Finish time: _____ File size: _____ (MB)	
2.4-4	To support sub-accounts using digital TOs - <b>Simulate</b> distribution of merged IPDF TO by updating local file server and <b>simulate</b> sending notification to digital users of RAC update.	Merged IPDF TO containing RAC is now digitally available.	
2.4-5	To support sub-accounts using paper TOs - <ol style="list-style-type: none"> <li>1) Print the RAC PDF file.</li> <li>2) Copy double-sided, ensuring odd-numbered pages are on front and even-numbered pages are on back.</li> <li>3) Inspect paper change package for accuracy.</li> <li>4) Distribute copies to sub-accounts (<b>simulated</b>)</li> <li>5) Record completion date and time.</li> </ol>	Printed change package should resemble the TO pages being replaced.  Date: _____ Time: _____	
2.4-6	End of Test Scenario 4. Make copy of completed Test Procedures and mail original along with printed RAC package to: AF PDSM PO Attention: Vance Daunheimer 4027 Col. Glenn Hwy, Suite 300 Dayton, OH 45431		

## COMMENTS