Adoption of an Electronic Submission Process for Unclassified Technical Reports

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Abstract

In any given year the Air Force Research Laboratory's Information Directorate publishes an average of 250 technical reports describing the results of scientific research performed for efforts aimed at furthering the Air Force's C4I capabilities. Today's military environment places a premium on the rapid dissemination of information. However, the process used to distribute technical reports has remained heavily manpower-intensive and paper-based, almost unchanged for the last 50 years. In this paper the authors describe a re-invention of the business process used for distribution of technical reports. This new process uses the latest information technology as an enabler to make the process more streamlined and cost-efficient. As a result of implementing this new process, the flow of scientific information is more rapid, Government mandates to reduce the amount of paperwork generated are adhered to, and significant cost savings can be achieved.

1.0 The Existing Technical Report Distribution Process

Currently, Department of Defense (DoD), Air Force (AF), and Air Force Research Laboratory (AFRL) regulations Department of Defense Instruction (DoDI) 3200.12, DoDI 3200.14, Air Force Regulation (AFR) 61-202 and Air Force Research Laboratory Instruction (AFRLI) 61-201 require formal documentation of a technical effort be published and distributed within 180 days of completion of the effort. It is a contractual requirement that contractors supporting the Air Force Research Laboratory currently submit five paper hard copies of the technical results and one electronic softcopy in Microsoft Word Format. Technical efforts can range anywhere from short duration (e.g. 6 months), low cost (e.g. $50K) to multi-year, multi-million dollar programs. Therefore, the Technical Reports can range anywhere from a few pages to several hundred pages.

One hard copy of the report is retained by the office responsible for publishing the report and the remaining four copies are sent to the research engineer in charge of the technical effort.   Once the hard copies are received, it is reviewed by the office responsible for publishing the report and logged into a manual tracking system. The Technical Report is then forwarded to the research engineer through his appropriate Management Office for review, approval, and to identify its distribution requirements.

Those distribution requirements are determined by accessing a locally developed (dumb-terminal-based) system using an application called the Tech Report Distribution List (TRDL). The TRDL application generates the actual address lists and mailing labels for hard copy distribution of the report. The distribution list for a typical Technical Report could include up to 50 (or more) addressees. Each addressee means another hard copy of the report must be printed, packaged, and mailed. The entire package; report, approval signatures, two standard forms; Rome Research Site (RRS) 2898 – titled Technical Report Control and Standard Form (SF) 298 – titled Report Document Page, mail distribution list, and mailing labels are then returned (via interoffice mail or hand-carried) to the office responsible for the actual publishing of the report.   Then, that office performs the final editing, assembly, and preparation for printing and distribution.

The publishing office accomplishes three more documents; the RRS 2942 – titled Reproduction Assembly, Defense of Department (DD) 843 – titled Request for Printing and Binding Services and a Microsoft Excel-based costing sheet. Then, the complete (hard-copy) Technical Report is forwarded to the printing facility via manual methods.

Upon completion of printing, the number of hard copies of the Technical Report required for the distribution list is sent back to the office responsible for publishing, which in turn passes them to the Mail Room for packaging, application of postage, sorting, and mailing. A requirement for all technical efforts is that one copy of the Technical Report be sent to the Defense Technical Information Center (DTIC). Once the hard copy Technical Report is received at DTIC, it is scanned into their system for future use.
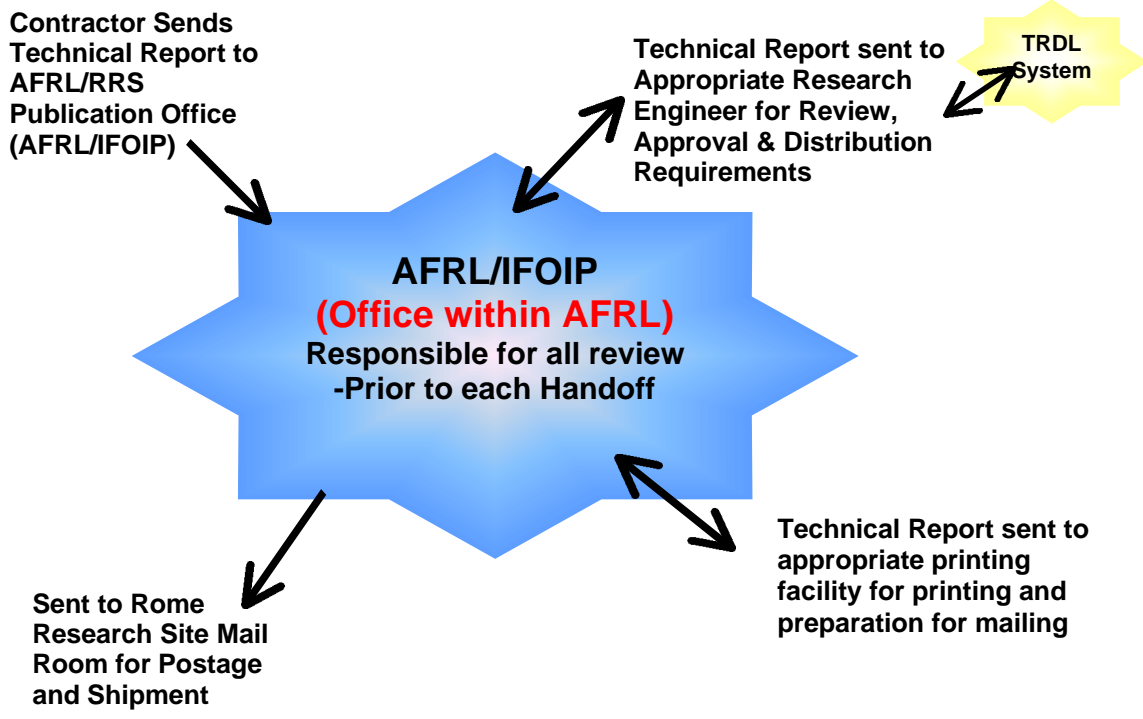
Work Done via Hardcopy / Printing / Distribution

Contractor Sends Technical Report to AFRL/RRS Publication Office (AFRL/IFOIP)

Technical Report sent to Appropriate Research Engineer for Review, Approval & Distribution Requirements

TRDL System

AFRL/IFOIP
(Office within AFRL)
Responsible for all review -Prior to each Handoff

Sent to Rome Research Site Mail Room for Postage and Shipment

Technical Report sent to appropriate printing facility for printing and preparation for mailing

Figure 1-1

2.0 New Technical Report Distribution Methodology

In the re-engineered process, the requirement for the contractor to provide five hard copies and one soft copy are changed to requiring only one paper hard copy and one electronic (soft) copy of the Technical Report.

The soft copy of the Technical Report is placed in a controlled access directory on a centralized file server. Access to the report is restricted to only those parties that need to review/process the document. Email is sent to both the research engineer responsible for the technical effort and his Management Office notifying them that the technical report has been received and is ready for review. Once the research engineer reviews the report, his supervisor must also review and approve the report. A significant change to the old process is that all reviews are now performed on the electronic copy of the report, not a paper hard copy. Upon completion of all reviews an email notification is sent to the office responsible for publishing the technical report. Note that although the local email system is currently used for notification, it is anticipated the process will be transitioned to a formal workflow application, once an AF-standard workflow product is procured and installed. Upon notification of completion of the review/approval process, the publishing office electronically assembles and prepares the technical report for distribution.

Completed technical reports are saved in a portable document format (PDF) file and then are forwarded (in electronic form versus hard copy) to the Defense Technical Information Center (DTIC) via STINT-TR (a DTIC software package) for unlimited and limited distribution reports. Further distributions will be handled via e-mail notification directing distribution list addressees (and future requestors) to the DTIC web site. By directing interested parties to the DTIC web site, where they can download an electronic copy of the report, this new process eliminates the need to create and print address lists and labels by the engineer or administrator. Even more significant, this process eliminates all printing, collating, and sorting of the technical report itself along with the need to process all the forms formerly required for printing and distribution.
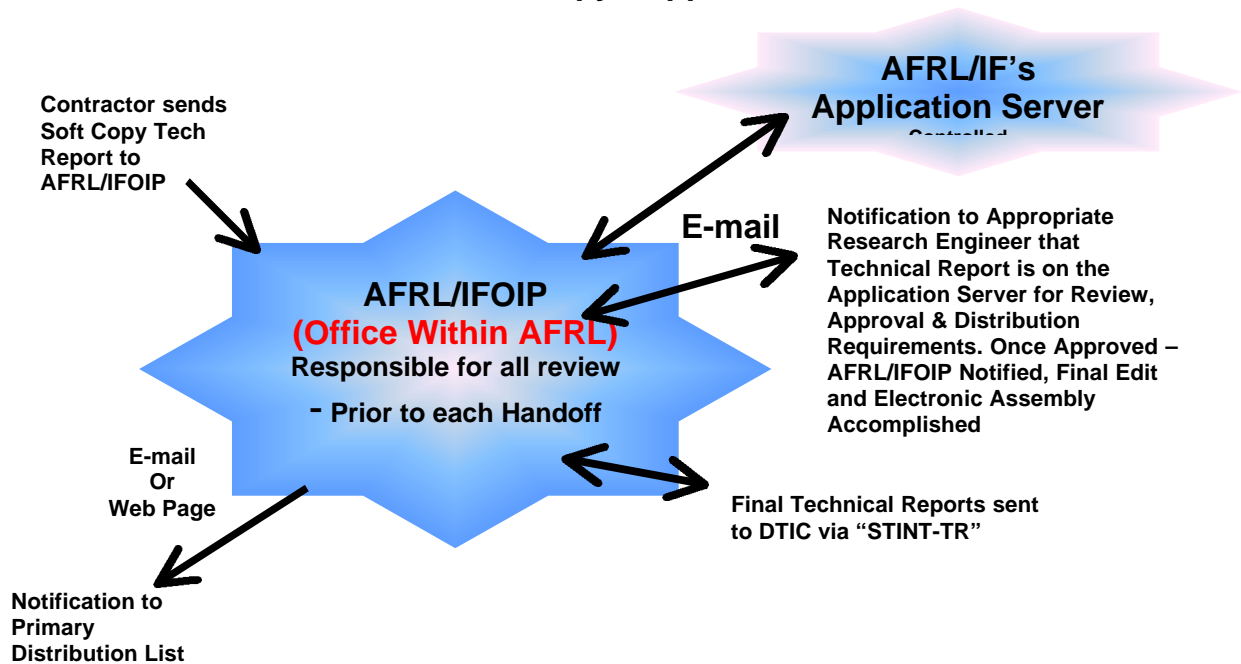
Work Done via Electronic Copy / Application Server

AFRL/IF's Application Server

Contractor sends Soft Copy Tech Report to AFRL/IFOIP

E-mail

Notification to Appropriate Research Engineer that Technical Report is on the Application Server for Review, Approval & Distribution Requirements. Once Approved – AFRL/IFOIP Notified, Final Edit and Electronic Assembly Accomplished

AFRL/IFOIP (Office Within AFRL)
Responsible for all review
- Prior to each Handoff

E-mail Or Web Page

Final Technical Reports sent to DTIC via "STINT-TR"

Notification to Primary Distribution List

Figure 2-1

3.0 Challenges

Changing from a hardcopy manual process to an electronic email process in theory is relatively simple. Today's technology easily supports all these innovations. However, it is imperative not to overlook the people that are currently performing the functions, to ensure success of the project. People impacted by the new methodology need to understand their role in the new process and how their efforts will improve efficiencies. Without this buy-in and continued coaching throughout the automation process your end goal may never be achieved.

4.0 Benefits

One of the most obvious benefits to this new methodology is immediate dollar savings. Saving in the first year of using the electronic submission process will be over $100K. No longer will multiple hard copies of unclassified limited and unlimited distribution Technical Reports need to be printed, labeled, collated, or sorted at the local site. By moving to an electronic distribution system, a significant amount of paper waste, manpower, and postage costs is eliminated. Under the old system of mailing hard copies to a distribution list, inevitably many addressees had moved or were no longer interested in the subject area. If the addressee was not found, the hard copies would be returned and be either discarded or re-addressed and mailed again. Although not a direct benefit to AFRL, this new process also reduces the labor required by DTIC since they no longer have to scan in hard copies of the Technical Reports to create an electronic copy for their use.

Another benefit of the new process is the elimination of the Technical Report Distribution List (TRDL) System. The hardware platform and software system can now be decommissioned, meaning savings on personnel costs associated with all aspects of maintaining that system (hardware upgrades, software licensing, maintenance, system administration, user training, etc.).

The new methodology also streamlines the report distribution process by eliminating the use of three standard forms and by eliminating the tedious manual process involved with moving the large amounts of paper copies from one location to another. This process helps meet the guidelines established in the 1997 Defense Reform Initiative and 1998 Government Paperwork Elimination Act to make processes more automated and reduce the amount of paperwork required. Bottom-line the new process improves efficiency, quality, and timeliness.