Transforming Document Clearance: Paving the Way for Electronic Document Management

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Abstract

The document clearance process at the Oak Ridge National Laboratory had served the Lab well for fifty years. However, with the advent of the World Wide Web and the increased expectation of electronic documents, it became clear that the paper-based review process would impede the changeover to electronic documents. With that goal in mind, a team of information professionals started a project to revamp the document clearance process. They made the document clearance process the "hub" for gathering electronic documents. Several hurdles were overcome, and several remain. This paper discusses the history of the project and its current status.

Background

The Oak Ridge National Laboratory began its life as the Clinton Laboratories during World War II. In those days, information about the Manhattan Project was "born classified"; if the Clinton Laboratories produced 5,000 documents in 1944, then all 5,000 were classified. In 1997, ORNL produced just seven documents with any sensitivity whatsoever. It produced zero classified reports. The bulk of the sensitive documents dealt with Cooperative Research and Development Agreements.

Despite the shift in information sensitivity, the document clearance process at ORNL had changed little until 1993. Publishing a technical report at the beginning of that year took 10 signatures, and some technical editors compared clearing a report with the "stations of the cross."

Once cleared, bibliographic information about documents was entered into a database of cleared documents. An annual paper list of cleared publications was sent out to divisions, where they were forwarded to individual authors, updated to reflect publications information (often in pencil on the paper sheet), and rekeyed into the database. The database was then used to report publications information to Laboratory management.

In summary, we had six problems to solve:

1. How to change our habit of reviewing every document for classification.
2. How to change our habit of having every document reviewed at the Patent Office.
3. How to eliminate the choke point of having all records go through one input point.
4. How to respond to OSTI's request for electronic documents.
5. How to give simpler guidance for routine things like cover pages and title pages.
6. How to continue our responsibility for holding the record copy of ORNL reports.

Our "Twelve-Step" Program

Step One. Beginning in 1993, the Classification Officer for ORNL initiated a program of using Designated Unclassified Subject Areas (DUSAs). Documents in these areas no longer required a review from an Authorized Derivative Classifier; they needed only for the originating division to state that the paper was in a DUSA. A list of specified non-DUSA areas was provided to each division for this purpose.

Step Two. Related to Problem 3, each time a researcher or division wanted a list of their publications, they had to call the sole database-input person, who then tapped into the database and provided the list. We took our existing database and moved it from a Dbase II format on a remote computer into BasisPlus on our own machine. We put the database on both our intranet and the Internet. Authors and divisions could then pull down their own publications list without having to request it directly from us.

Step Three. Despite the liberalization of the classification piece of the clearance process, the review of every document by a patent agent added two days to the clearing of every document. And when the author and originating divisions could clearly see that no invention was involved, they perceived the clearance process as a nuisance. And it most cases, they were correct.

In May of 1996, ORNL's Patent Office began a "DUSA" program of its own. Since the term DUSA was already taken, they termed the new policy "the patent waiver" policy. Similar to the DUSA program for classification, the patent waiver policy allowed knowledgeable persons within the originating division to indicate that no review by a patent agent was required.

Step Four. Later in 1996, we piloted the change in our "record update" practice. Instead of sending out reams of paper lists of cleared documents, we sent out an e-mail to divisions that contained the URL for our site that described how to call down and update the records. The resulting updates were sent to a special area, where the person who formerly did data entry provided a quality assurance check. The records were then updated.

Step Five. Our clearance form was quite comprehensive; in fact, it took up all of a two-sided form. It not only was difficult to fill out, but also resulted in few forms being received that were both correct and completely filled out. Our solution here was to move to a Web-based form. This had two foreseen advantages: we could eliminate rekeying information and we could require fields to be filled out. As time went on, we also realized that instructions, help fields, and pick lists could be incorporated into the form. So we added these features as well.

Step Six. While it took ten signatures to approve a technical report, fully five signatures were in the originating division. Two other signatures were report specific: the person preparing the cover and the reproduction department. Of the remaining three, two were now optional--classification and patent. Since most of our documents are not technical reports, only one signature remained outside the originating division for most documents. That signature was mine.

Our nonreport documents consist mainly of abstracts, viewgraphs, conference papers, and journal articles. The format for these are controlled by the publishers, so my office is left with little to check for. Consequently, we changed the process of deeming these documents "cleared" to one that deems them "registered." In this manner, the Laboratory continues to have a tracking mechanism for its publishing activities while sidestepping a "non-value-added" process.

Step Seven. Having five signatures certifying content was seen by the divisions as excessive, so there are now three signatures within originating divisions. Each signature serves a separate function, which are roughly agreed to as the following: the author signs to indicate the document is complete and scientifically sound; the author's supervisor signs to indicate agreement and also checks for things like proper acknowledgment of funding;

the program manager signs to indicate agreement with the first two and look for broader issues like export control.

Step Eight. To make the Web-based clearance process totally electronic, documents have to be submitted in an acceptable electronic format. Documents that have figures or other sections mechanically pasted into them cannot be captured as record copy electronic documents. Thus, the convenience of clearing a document via the Web would be nullified if paper documents still had to make their way through the system.

To help authors create totally electronic documents, templates using the Laboratory's style were made available on the Web. Also, scanners are readily available to reduce the need to "paste" pieces of a document together. Authors can now download standard "blurbs" and disclaimers that were previously available in print format on covers, etc. With these tools and guidance on how to use them, users can create documents in their favorite word processing program, and their documents can be converted easily to PDF for record copy storage and retrieval.

Step Nine. Such a significant change in a process that affects virtually every researcher at ORNL was not a candidate for a "turnkey" approach. While every attempt was made to anticipate divisional needs and reactions, we knew that "slow and steady" was our preferred route. We chose six pilot divisions, and we currently are still in the pilot stage.

Step Ten. Receiving the documents electronically is the last step of our process, and it is proving to be the most difficult step. In the paper-based process, we receive a copy of the document with a copy of the signed clearance form attached. In our talks with pilot divisions we discovered that reviewers always prefer paper. There are at least two reasons for this preference: (1) habit--there's something about holding the document in your hand and being able to make handwritten comments in the margins that appeals to most folks; and (2) portability--you can carry a paper around with you and read it when the opportunity arises (car pool, parking lot, red light, etc.)

Step Eleven. We chose PDF as the format we'd prefer the originators to use, and we were surprised when our first pilot division happily agreed to convert all their documents to PDF. The manner in which other documents will be converted to PDF is still an issue, since this project is a labor of love as opposed to a funded directive. We're sure to get a lot of experience in file conversion, and if anyone reading this has tips, horror stories, or other suggestions, please feel free to contact any of the authors of this paper.

Step Twelve. While the "record copy" question proved to be daunting for several years, ORNL has elected to promote transition to electronic recordkeeping. We're going to maintain record copy electronically. ORNL Records will be coordinating these efforts with originators of electronic records and computer systems managers to ensure that all electronic information records are identified and properly managed and dispositioned.

Lessons Learned

Virtually everything we've learned that's of interest can be found in textbooks and self-help books throughout the world:

Break the project into accomplishable chunks. Our first attempt at changing this process was characterized by numerous meetings, and our original approach would have been the "turnkey" approach. Fortunately, cooler heads prevailed, and the pilot approach was taken. (NOTE: Cooler heads are often found atop the necks of upper managers. They usually have excellent input to high-visibility projects.)

Nothing beats asking the customer. Trying to eliminate information that wasn't used in the clearance process, we took the "B&R code" field off our Web form. During the first demo, the pilot division told us not only to add the field, but also to add the capability to handle multiple B&Rs. We had anticipated the move to PDF to be the biggest issue; for this first pilot, they just said "No problem."

Teamwork succeeds like nothing else. Invaluable suggestions for this project came from every direction--librarians, editors, records managers, division directors, and secretaries. By listening and evaluating, we came up with the most viable process.

Perseverance is king. Calvin Coolidge said it best: "Nothing in the world can take the place of persistence. Talent will not; nothing is more common than unsuccessful men with talent. Genius will not; unrewarded genius is almost a proverb. Education will not; the world is full of educated derelicts. Persistence and determination alone are omnipotent." This project had several false starts, and the temptation to throw the entire project onto the "too-hard pile" was great. We persevered, and we are getting there.

Biographical Sketches

Bill Clapper is a Computing Analyst in the Computing, Information and Networking Division at ORNL. He has been developing electronic systems for records management and library groups at ORNL since 1987. The most recent applications include web access to the library catalog, the ORNL publications database and a retrieval system for photographs and graphic images.

Jeanne Dole is the group leader for the Oak Ridge National Laboratory's Publishing Services group. She has 14 years experience in writing, editing, publishing, and managing technical publications organizations. Jeanne is active in the local chapter as well as at the international level of the Society for Technical Communication. She holds a B. A. in English from Moravian College and an M. A. from Virginia Tech. She became a Certified Manager through the Institute of Certified Managers in 1995.

Dave Hamrin is the Technical Information Officer and the Classification Officer for the Oak Ridge National Laboratory. He has 25 years in the DOE national laboratory system, 11 of them in the area of publications management and document clearance. This project is the culmination of several years of effort.

Rebecca A. Lawson, ORNL Records Policy and Management Group Leader, has over twenty-two years experience in records management and document control at Lockheed

Martin Energy Research and Energy Systems. Positions include Records Manager for the Oak Ridge Environmental Restoration Division, where she implemented an active records program, and Department Head for the ORNL Site Records and Engineering Services Department. She has a B.S. in Management.