
Research Output Publications and CRIS^{*}

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Abstract

Publications still are regarded as a major measure of R&D output. Debates rage over the relative quality of publications in journals, conference proceedings, book chapters, the media. Grey literature is emerging as an important component. Despite the move of journals and conference publications to electronic versions accessed online, rising prices and reducing library budgets are revolutionizing the market: eprints and self-archiving extended with e-annotated peer-review are preferred in some disciplines.

Introduction

Publication of research results has been a mainstay of the development of human technological culture for 5000 years. Early Hittite clay tablets representing inventories (early database) and the Phaistos wheel representing a prayer or poem lead to Trajan's column recording history (or at least his version of it) and The Book of Kells and onwards through the Domesday Book (another database) to the drawings and writing of Leonardo da Vinci (technical reports).

The availability of inexpensive printing provided an opportunity for explosive growth; some measure of quality was required. Learned societies criticized publications, often when in manuscript form and read to an audience, leading to the current peer-review process. Today a hyperlinked multimedia eprint with executable code and associated datasets may be reviewed by anyone adding an e-annotation.

The process of externalizing the concepts in the researcher's mind, of recording them and associated experimental results or observations, preserves the result of the work beyond the lifetime of the researcher and also makes it replicable and distributable. Some philosophers claim that this 'preserved external memory' is the major distinguishing feature of humans.

Kinds of Publications

Publications of interest to the R&D community are very varied. In a physical dimension there are ancient publications on stone, papyrus, vellum and other materials leading through paper to electronic digital material. In the subject dimension they vary through all the areas of R&D: arts and humanities, social and economic science, physical and natural sciences, engineering and technology, mathematics and philosophy. In the mechanism dimension there are book chapters and books, articles in journals, conference proceedings and workshop proceedings, technical reports (including instructions and methods extending to computer programs), popular media reports and multiple mechanisms considered outside of the R&D publications field such as publicity or marketing material. These latter groups of publications, outside conventional R&D publishing, are commonly referred to as grey literature (Jeffery 1999, Jeffery, Asserson and Revheim 2000). In the detail dimension there are abstracts, summary/review articles and full articles. Most publications reference previous related work by the author(s) or others and may also reference more detailed material such as datasets, computer programs, laboratory notebooks, museum collection artifacts and grey literature.

In addition there are project proposals submitted requesting funding; these usually contain much useful R&D information but usually are unavailable until a project is funded, at which time at least a summary becomes available. This is usually stored in the project entity in a CRIS (as title and abstract) rather than the publication entity although the full version of the application (and the referee reports) could be stored there in this CERIF extension proposal.

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