

The DACS is the Department of Defense Software Information Clearinghouse. The DACS is sponsored by the Defense Technical Information Center (DTIC) through the Information Analysis Center (IAC) Program.

The DACS serves as a gateway to software technology information by providing access to WWW resources, publishing technical reports, hosting seminars, publishing the *Software Tech News* newsletter, presenting courses, and performing technical studies for patrons of the Center.

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DACS Datasets & Databases



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www.dacs.dtic.mil

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DACS Databases

The DACS gathers software engineering experience data, as well as documented scientific and technical information. Scientific and Technical Information (STINFO) consists of documented information concerning the state-of-the-art and technology aspects of the computer software field.

STINFO sources include technical reports, trade journal publications, conference and symposia proceedings, theses, texts, and product descriptions and specifications. This information is stored in computerized databases for easy retrieval.

The Software Engineering Bibliographic Database (SEBD)-

The DACS Software Engineering Bibliographic Database (SEBD) provides a readily accessible source of comprehensive information on the state-of-the-art in software engineering and channels the information to those able to use it in developing, maintaining, and managing software. The bibliographic collection is composed of texts, technical reports, theses, journal articles, proceedings, and other documents relating to software engineering, reliability, costs, and quality factors, maintainability and other appropriate topics. These documents are obtained from the Defense Technical Information Center (DTIC), from the National Technical Information Service (NTIS), from professional societies, and from publishers. The computerized database facilitates document retrieval by using keywords or any portion of a document citation. A custom search is performed by following the instructions provided. The SEBD is available on CD ROM, or on-line at: www.dacs.dtic.mil/databases/sebd.shtml also you can perform your own searches at your convenience.

Return-On-Investment Database 1.0

The DACS ROI Database captures the benefits gained by software organizations that have undertaken improvements in software management via software process improvement. Results from in excess of 50 organizations are included in this database. Improvements in cost, schedule, reliability, employee morale, and customer acceptance resulting from these improvements have all been captured in this database.

A web based user interface is also provided to search the database to allow users to identify which types of goals (e.g., reduce cost, improve quality) they wish to understand, which types of improvements (e.g. inspections, cleanroom) are to be considered, and what period of time they wish considered for their query. The system will then collect all data that would be of interest and presents the data in an easy to understand format.

DACS ROI CD (Report + Spreadsheet + ROI DB)
[Available ~9/1/00)

Software Life Cycle Experience Database (SLED) -

There is a real need to collect productivity and failure data on the development, operation, and maintenance of software to support research in the software field. Data is needed which will allow researchers to isolate factors that contribute significantly to the cost, reliability, and quality of the software; to measure achieved reliability; to predict development and maintenance costs; and to track the progress of a software development project. The DACS reviews data sources, contacts the potential data source, and negotiates with the source to secure datasets for inclusion in the DACS Software Life Cycle Experience Database (SLED). When possible, the DACS coordinates the automatic submission of updated data to the DACS by the source. Five datasets are currently contained within SLED.

Software Engineering Datasets

Architecture Research Facility (ARF) Error Dataset - Data describes 117 error reports, software characteristics data on 253 modules, and project aggregates for the ARF developed at the Naval Research Laboratory in the late 1970s. Available on a PC or Mac floppy disk or in hardcopy form.

DACS Productivity Dataset - This dataset contains summary information from over 500 software projects, incorporating size data, error data, project duration, total effort, language data, and information on the usage of various software implementation technologies. Available on PC or Mac floppy disk.

NASA/AMES Error/Fault Dataset - Error/Fault data on 3,700 software problem reports collected on nine projects. Data was originally compiled by NASA/Ames Research Center in the late 1970s. Available on a PC or Mac floppy disk or in hardcopy form.

NASA/SEL Dataset - Data collected by the Software Engineering Laboratory (SEL), at NASA Goddard Flight Center, to measure the effectiveness of software development methodologies. The 5 datasets contains over **50,000 records**; the majority of the dataset is from component status reports and run analysis reports. The remainder of the dataset is project comment information, change reports, resource summary reports, and component summary reports. **Last updated in November 1997.** Available in hardcopy form or on CD-ROM.



Software Reliability Dataset - Failure data on 16 software systems collected during the phases of software test and operation during the 1970s. Suitable for validating software reliability models. Available on PC or Mac floppy disk or in hardcopy form.