

# Resource Summary Report

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## Conversion Software Registry

RRID:SCR\_007236

Type: Tool

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### Proper Citation

Conversion Software Registry (RRID:SCR\_007236)

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### Resource Information

**URL:** <http://isda.ncsa.uiuc.edu/NARA/csrAbout.html>

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**Description:** Conversion Software Registry (CSR) has been designed for collecting information about software packages that are capable of file format conversions. The work is motivated by a community need for finding file format conversions inaccessible via current search engines and by the specific need to support systems that could actually perform conversions, such as the NCSA Polyglot. In addition, the value of CSR is in complementing the existing file format registries and introducing software quality information obtained by content-based comparisons of files before and after conversions. The contribution of this work is in the CSR data model design that includes file format extension based conversion, as well as software scripts, software quality measures and test file specific information for evaluating software quality. The CSR system serves as the source of information and a test bed for the system that can execute the conversions automatically by using the third party software, for example, NCSA Polyglot. The CSR system is a database with a web-based interface that provides services related to a) finding a conversion path between formats b) uploading information about the 3rd party software packages and file extensions, c) uploading files for testing, and finally d) uploading scripts in operating system (OS) specific scripting languages (Windows AutoHotKey, AppleScript and Perl) for automated conversions according to the idea of imposed code reuse used by NCSA Polyglot. In order to provide file format conversion services, CSR have included the following components into CSR related to software capable of conversions: input and output file formats (extensions), scripts operating on the software, validated files to be used for information loss measurements, as well as quantitative measures of the information loss for conversions. The CSR focuses: on software and finding the format conversion paths described by a number of software packages and unique input and output formats. The formats themselves are represented by extensions. While not always unique, extensions are often the only accessible information when the 3rd party software is installed (often listed under the File/Open menu in most packages). The CSR also contains information about the software, operating system, software interface and scripts to execute the software. The scripts are important

for the automating conversions with the 3rd party software and can be implemented using AutoHotkey scripts (Windows), AppleScript (Mac) or one of a variety of scripting languages for Unix. The information loss due to file format conversions is measured externally by different techniques within the NCSA object-to-object comparison framework called Versus. The comparison is relevant to the software domain, for example for 3D applications surface area or spin images are used and the loss (0-100 range with 100 representing no loss) for a particular software-conversion pair is stored in the database. The information loss also represents edge weights to Input/Output (I/O) Graph, a simple workflow used for finding the shortest conversion path. The CSR is written as a web service. It consists of three main components: Query, Add, Edit. In the Query mode users can a) view list of all software packages with their conversion options, b) select subsets of software in the I/O-Graph, c) search the database by conversions, software, extensions, MIME and PUID. The I/O-Graph contains all information about installed applications and the conversions they allow. The JAVA applet front end is part of the CSR web visualization interface. Section Add allows users to add new software packages with their conversion capabilities and upload the software scripts to automate them. The last section, Edit is designed for adding detailed information about the software, extensions and for uploading the test files. CSR requires users to login for adding and editing. The web fields are auto completed to help search. Sponsors: This research was partially supported by a National Archive and Records Administration (NARA) supplement to NSF PACI cooperative agreement CA #SCI-9619019. Keywords: Software, Registry, Information, Conversion, Database, Tool

**Synonyms:** CSR

**Resource Type:** database, data or information resource, software resource

**Resource Name:** Conversion Software Registry

**Resource ID:** SCR\_007236

**Alternate IDs:** nif-0000-37666

**Record Creation Time:** 20220129T080240+0000

**Record Last Update:** 20260819T044208+0000

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## Ratings and Alerts

No rating or validation information has been found for Conversion Software Registry.

No alerts have been found for Conversion Software Registry.

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## Data and Source Information

**Source:** [SciCrunch Registry](#)

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## Usage and Citation Metrics

We found 4 mentions in open access literature.

**Listed below are recent publications.** The full list is available at [NIF](#) .

Burns GW, et al. (2025) Spatial transcriptomic analysis identifies epithelium-macrophage crosstalk in endometriotic lesions. *iScience*, 28(2), 111790.

Littleton SH, et al. (2024) Variant-to-function analysis of the childhood obesity chr12q13 locus implicates rs7132908 as a causal variant within the 3' UTR of FAIM2. *Cell genomics*, 4(5), 100556.

Lim Y, et al. (2021) Multiplexed functional genomic analysis of 5' untranslated region mutations across the spectrum of prostate cancer. *Nature communications*, 12(1), 4217.

Garcia-Lozano M, et al. (2020) Effect of Pepper-Containing Diets on the Diversity and Composition of Gut Microbiome of *Drosophila melanogaster*. *International journal of molecular sciences*, 21(3).