The *HistCite* System for Mapping and Bibliometric Analysis of the Output of Searches Using the *ISI Web of Knowledge*

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We have previously reported on the development of the *HistCite*™ software for use in algorithmic historiography.[1] The initial system has gone through a number of changes. In this poster demonstration we will illustrate the most recent version and emphasize its mapping and bibliometrics features.

The *HistCite* system was developed to help users evaluate the output of topical and citation-based searches. Once "marked lists" are created on the *Web of Knowledge*,[SM] text files (.txt) are generated similar to those used for exporting records to citation managers such as *Reference Manager*. By executing the *HistCite* software, a series of tables and graphics is created. The tables include chronological sorts as well as frequency rankings by author and journal. In addition, files can be sorted by local or global citation frequencies. More recent features include vocabulary analyses which display the frequency of singleton terms as well as title word pairs.

Once a list of articles is collected, the *HistCite* system permits the user to customize selection of individual papers (nodes) to be included in the graphical displays called historiographs. Ordinarily, default maps are based on selecting the top 15 to 25 papers in the local collection, which are, by definition, those with the highest citation impact in the topic, either by local or global citation scores. Time frequency histograms may also be generated. In addition to the selective mapping capability, there is a searching and marking facility (by author, title or abstract word, journal, citing or cited node, publication year, etc.), which permits creation of subsets of the collection for separate analysis, e.g., for evaluating different time periods, or by deletion of individual nodes or groups of nodes. New bibliometric features include the ability to generate frequency distributions, percentiles of citation scores, and other quantitative parameters such as the number of references, number of authors, publication years of nodes, and "outer references". The latter can now be

sorted by author or journal which allows better characterization of the bibliography under analysis and supplements the editing feature which is used to correct variations and errors in cited references.

The poster will include several topical examples. Several dozen HTML files can be accessed to review different applications of the *HistCite* software at:www.histcite.org. The collections for *JASIST*, Information Science, and Digital Libraries are particularly relevant to this meeting. Other historical examples include Watson-Crick[2] and protein microarrays.[3]

The full poster will also be available at:
http://garfield.library.upenn.edu/papers/sistposter2004.pdf

REFERENCES

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[2] Garfield E, Pudovkin AI, & Istomin VI. (December 2003). "Mapping the Output of Topical Searches in the *Web of Knowledge* and the case of Watson-Crick," *Information Technology and Libraries*; 22 (4),183-187 http://garfield.library.upenn.edu/papers/casewatsoncrick2003.pdf

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