

8-15-1997

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Michael Wolfe  
m.wolfe@ieee.org

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## Recommended Citation

Wolfe, Michael, "A Demonstration of Procrustes: A System to Automatically Deploy Data-Based Information Systems over the World Wide Web" (1997). *AMCIS 1997 Proceedings*. 10.  
<http://aisel.aisnet.org/amcis1997/10>

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# **A Demonstration of Procrustes: A System to Automatically Deploy Data-Based Information Systems over the World Wide Web**

[Michael Wolfe](#)

P. O. Box 712, Morgantown WV 26507-0712 (304) 598-2718  
email: [m.wolfe@ieee.org](mailto:m.wolfe@ieee.org) [URL:http://wolfe.mang.wvu.edu](http://wolfe.mang.wvu.edu)

**Abstract:** Procrustes automatically deploys any ODBC data-based Information over the World Wide Web. No knowledge of HTML, SQL, or ODBC protocols is required on the part of the person publishing the database. Users are provided with a graphical Boolean query capability requiring minimal database knowledge.

## **Introduction**

Procrustes was an innkeeper in Greek mythology who ensured that his guests always fit his bed by shortening or lengthening the guests, as required. Likewise, Procrustes "fits" any open database connectivity (ODBC) data-based Information System to the World Wide Web.

Figure 1. IDSS Framework (Bonczek, Holsapple, and Whinston [Bonczek et al., 1981])

Today, many organizations have departments whose function is to maintain databases. The impetus for Procrustes was an Air Force department who responded to written or telephoned queries about their databases by running the query and returning a written report to the person requesting the information.

Procrustes was developed to take any ODBC database, which included all the organization's legacy databases, and automatically generate a set of forms which allowed users to perform limited Boolean queries on the databases, thereby re-engineering the process by which this information had formerly been disseminated.

Forms on the Web require scripts to process these forms, and Procrustes provides the requisite scripts as well as the forms.

## **Other Systems**

Publishing a database on the Web requires 1) a database developer; 2) a web scripiter to connect the database to the web; and 3) an end-user who can utilize the interface. The number of systems to assist with the publication of databases over the Web is rapidly increasing, and each makes different demands on these three classes of personnel.

One of the first such systems, COLD FUSION, allows the HTML author to include SQL statements in the web pages; however, COLD FUSION assumes that the HTML authors are familiar with SQL. A second system, by BulletProof, provides the end-users with a java-based program provides a full-featured report writer; however, the end users where Procrustes was developed are not all capable of utilizing such a powerful tool. A newer tool is Visual Interdev, but this also has a rather steep learning curve for the database developer and the script author. Procrustes makes no such demands on its users, either the publishers or the browsers.

## **Description**

The beauty of Procrustes is the simplicity of its use. It runs in the Windows, Windows NT, and Windows 95 environment. The publisher is prompted for a database. In the case of a ISAM desktop database, this

consists of a directory in which the database files reside; or, in the case of an Access database, it consists of the .mdb file.

In the case of a mainframe database, Procrustes requires that systems personnel set up the Windows ISQL interface, giving the database a name known to the Windows environment. Once set up, the publisher need only select the database by name.

Procrustes then reads the data dictionary, and uses the information to create a query form in HTML for the database. This form allows simple Boolean queries. Procrustes then prompts for the address of the Web directory where items may be published, and writes the form to that directory.

Procrustes itself must reside in the cgi-win directory of the Web Server. Assuming the server is running, anyone with a Web Browser may then view the form and query the database. Because the database is open to anyone with access, updates are not allowed over the Web, but must be done locally; however, all queries may be carried out over the Web.

The Web server is normally set to restrict access to members of the organization, unless the database is to be used for an external website. In the latter case, the HTML generated by Procrustes will generally require a certain amount of manual modification to make it more presentable.

### **Outline Of Demonstration**

I will have a PC running a Web Server, a Web Browser, Procrustes, and some sample databases from Paradox, Access, and dBase. The databases I will provide will be fairly simple, as I only intend to give a demonstration of the capabilities of Procrustes. I will have Procrustes generate both forms and scripts which will then allow viewers to query the database with ad-hoc queries using the generated forms. Viewers will be asked if they have any ODBC databases available on floppy or CD-ROM media, and if any such databases are provided, Procrustes will be used to publish those databases to the Web.

If viewers are interested, I can address some of the issues in improving the appearance of the generated web pages.

Procrustes is intended to produce an interface that is accessible to almost any user. Ideally, I'll be able to take a database provided on floppy disk from one person and have another query the database as part of the demonstration.

Following the demonstration, I will discuss the implementation issues, and some of the problems I encountered trying to transition Procrustes from the research side to the production side of the organization.

### **Materials to be Handed to Attendees**

I will prepare a brief description of Procrustes as a handout. If viewers provide their own floppy disks, they may take a copy of the executable code, which is still in beta distribution. Persons taking a copy must agree that they will only use it until a commercial version is produced.

### **References**

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