

Software/Tool Comparison Worksheet

Criteria	Evaluation
Name	BRAHMS v7 Botanical Research and Herbarium Management System
Website/Contact	http://herbaria.plants.ox.ac.uk/bol/ The BRAHMS Project Department of Plant Sciences University of Oxford OXFORD OX1 3RB UK Tel: +44 (0)1865 275129 Fax: +44 (0)1865 275074
Description	<p>BRAHMS is a database management system for botanical researchers and herbaria, with the capacity to enter, edit, analyze, and publish data. It integrates data and images from specimens, botanical surveys, field observations, living collections, seed banks, and literature. BRAHMS is part of the plant diversity and systematics research group at the University of Oxford. A brief description of its functionalities can be downloaded from http://herbaria.plants.ox.ac.uk/bol/content/documentation/AboutBRAHMS2010.pdf.</p> <p>The software is free and available from http://herbaria.plants.ox.ac.uk/bol/brahms/Software.</p>
Computer hardware Operating system Supplementary Software	BRAHMS is designed to run on the Windows operating system. No other operating systems are supported. A full installation requires about 40 MB of disk space. The downloadable help documentation requires an additional 30 MB of storage.
Additional hardware/software required	None.
Features	<p>Uses FoxPro database file format, with file extension .dbf. Though the dbf extension is best known to represent the open source data base file format, FoxPro files do not reflect this standard.</p> <p>Allows the development of large taxonomic authority files, linked to the International Plant Names Index (IPNI).</p> <p>Provides for cataloging, barcoding, and imaging several categories of specimen data, including herbarium sheets, wood</p>

	<p>samples, DNA vouchers, and spirit collections.</p> <p>Provides tools for phenological and diversity analyses, development of checklists, and other research activities.</p> <p>Manages loans and labels.</p> <p>Provides a Rapid Data Entry (RDE) interface for viewing, editing, selecting, querying, reporting, mapping, exporting, and publishing data to the internet.</p> <p>Provides tools to sort, filter, calculate, tabulate, and analyze data.</p> <p>Provides for the development of custom processing scripts and queries, and for extending and customizing the structure of data tables.</p> <p>Provides tools for living collections, seed banks, and botanical survey projects.</p> <p>Data records may be linked to specimen images, living plants, illustrations, maps, and documents such as PDF files.</p> <p>For those producing revisions, monographs, flora accounts, and checklists, tools are provided to assemble and format taxa names, as well as their descriptions, selected references, specimens, and related indexes. A text reporting feature delivers formatted outputs to word processing software.</p> <p>May be installed on a single workstation or server-based for remote access by numerous simultaneous users.</p> <p>Data managed within the system may be transferred to other databases (SQL Server, MySQL, Access, etc.); to software packages for mapping and analysis; to data portals such as GBIF or BRAHMS online; and to XML output files.</p> <p>BRAHMS WebConnect provides the tools to design project websites and to upload selected data and images to the BRAHMS online server. BRAHMS online can also be installed on your own server.</p> <p>Online training guides and manuals are available.</p>
<p>Longevity</p>	<p>Established in 1999. Currently in use in projects in more than 50 countries with at least 48 online databases (http://herbaria.plants.ox.ac.uk/bol/brahms/Websites), largely</p>

	outside of the United States.
Initial cost	None.
Maintenance cost	None.
Ease of setup/installation prerequisite skills	Fairly easy. Moderate experience/background in relational database management and installation is recommended.
Continuing IT support required?	None.
Special skills required for maintenance	None. Familiarity with electronic databases enhances use and maintenance.
Challenges	<p>BRAHMS uses the FoxPro file format for data storage. This format and Visual FoxPro 9.0 (the latest version) will be supported by Microsoft, Visual FoxPro's current owner, through 2015 (though FoxPro enjoys a worldwide community of users and there is controversy about whether support for the product will actually end).</p> <p>FoxPro database format is usually not considered a true relational database management system.</p>