

AssetSmart[®]

SMART ASSET MANAGEMENT SOFTWARE

ENTERPRISE CATALOGING

Executive White Paper



- *Reduce Capital Expenditures*
- *Improve Utilization*
- *Search by Performance*
- *Enhance Records Quality*
- *Improve Metrology Metrics*
- *Turnkey your Upgrade Project*
- *Build a Catalog Warehouse*

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WHITE PAPER

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INTRODUCTION

Asset cataloging is a value-added process that standardizes and structures asset descriptive attributes into consistent formats and values, and automatically combines attribute data into useful management information so as to enhance asset management processes.

Computer search algorithms and languages such as SQL can obviously search for descriptive attributes such as model numbers, codes and descriptions in any database. However, unless the data is first accurately structured and normalized in the database, searches are likely to be slow, non-intuitive, incomplete and unreliable, particularly as inventory volume grows beyond a few thousand items. The “Garbage-In, Garbage-Out” problem has long been a major asset management headache. The AssetSmart[®] cataloging methodology was invented to solve this problem over twenty-five years ago.

The user interface works most cost effectively when asset data is current, consistent, complete and in a natural user language format. The human interface is also notoriously inconsistent in manually entering descriptive attributes into an asset database, particularly over a time span of months or years. While legions of computer classification code schemes have been attempted over the years to help solve the problem, none of them have ever met all of the necessary requirements. Many organizations attempt to solve the problem via brute-force, by assigning analysts to continually revalidate and manually sanitize the asset records, often relying on endless physical inventories and paperwork audits to support this costly and futile effort.

SMART/ENCATS™ Enterprise Catalog System has proven to be the only methodology with the architecture and integrity to survive the test of time and cost-effectiveness.

SMART/ENCATS™ supports a true five-level dictionary, with the three primary levels comprising manufacturer, model/part number, and noun description attributes. Unlike the simplistic solutions attempted by other suppliers, where each attribute is a standalone “lookup table”, all five dictionary levels are logically inter-related via database linkages. Thus, it is impossible to assign the incorrect noun description to a particular individual asset, once the catalog dictionary pattern is established – the manufacturer, model, and noun attributes are “locked” together.

An additional unique feature is the integration of performance specification data with each equipment model. This dimension adds two important capabilities not available in other software. First, the attributes are defined in metadata relationships as separate defined data entities—not just lumped into free form text records, or “hard-wired” into inflexible pre-defined data fields for each equipment category not foreseen by the original software designer. This performance attribute capability enables automated side-by-side comparison of operational characteristics for different models of equipment in the same general class. Secondly, equipment users can quickly search for and identify performance equivalents and substitutes in response to requests for specific

models of equipment—the normal simplistic request. Further, multi-function or re-configurable products may be cross-referenced across multiple noun and performance families; for instance, a search for a voltmeter will also turn up additional multimeters models having a selectable voltmeter function.

BENEFITS

- **Reduced Capital Expenditures/ Improved Utilization.** Structured cataloging, when coupled with other SMART utilization tools such as life-cycle replacement planning and redeployment, can reduce annual capital expenditures by as much as 10%. Clients have shaved as much as \$2 million off their annual capital budgets using these tools. Cumulative cost savings have exceeded \$20 million at several clients using SMART Asset Tools.
- **Powerful Performance Searches.** SMART/ENCATS' powerful drill-down search algorithms enable rapid search by any catalog attributes or combination of attributes such as manufacturer name, model, or noun description. More impressively, the user can also search not only noun category, but also by functional performance characteristics. For example, the system can instantly pinpoint all available power supplies with a 40 Vdc/5 amp output and their status, location, department, and availability.
- **Enhanced Records Quality.** Structured cataloging turns an otherwise ordinary asset database into an operational tool that enables all end users to locate needed in-house resources in a few seconds, thereby speeding up technical projects. Equipment requests can be easily and quickly matched-up with redeployable assets available elsewhere in the organization. Properly done, cataloging also stimulates users to participate in a single easy-to-use enterprise system, rather than laboriously creating private duplicative spreadsheets or records on their desktop PCs. Every turnkey conversion project by AssetSmart typically yields a 50% or greater improvement in data quality. Studies have consistently demonstrated that up to 20% of equipment items are “hidden” from enterprise visibility because of incorrect, inaccurate or incomplete descriptive attributes.
- **Improved Metrology Metrics For Enterprise Metrology.** Structured cataloging enables recall template records, procedures databases and quality history data to be precisely organized by manufacturer, model and standard noun description, thereby eliminating unnecessary duplication of records, speeding up setup time for new items, and enhancing the accuracy and precision of quality metrics. Downstream reliability analysis and recall interval adjustment by model family or equipment category (noun) are also greatly facilitated by cataloging.
- **Turnkey Implementation.** SMART/ENCATS™ provides both the Software and Catalog Data in a single package enabling customer data cleanup and conversion in a few weeks compared to years using less sophisticated tools.

- **Catalog Data Warehouse.** The flexible SMART architecture enables **SMART/ENCATS™** to “bolt-on” to a variety of customer property or equipment record systems. In a large enterprise having a diversity of different systems, **SMART/ENCATS™** is ideal for a Corporate Data Warehouse to facilitate inter-business unit redeployment.

INVESTMENT

The first time up cost for a company to establish a standardizing catalog database would be prohibitively expensive, involving many years of effort to design the database, program and test the software, build the catalog data, and link it to the asset database(s). The pre-packaged **SMART/ENCATS™** suite containing the **SMART/ECSS** search engine software and the **SMART/ECDS** Data Services component, enables customers to upgrade their asset and metrology databases to full structured cataloging capability at a fraction of the first-up cost. The **ECDS** master catalog database contains catalog attributes for over 300,000 pre-catalogued common models of test and measurement equipment, analytical instruments, IT equipment, and manufacturing equipment. With AssetSmart’s state-of-the-art computer matching algorithms, the bulk of customer asset inventories can be automatically catalogued and cleaned up in a few weeks, ready to go into production. However, since asset records frequently have numerous errors in the manufacturer, model, or description fields, AssetSmart analysts manually review and proof the conversion, as well as hand match any remaining fallout. Although customers can create their own custom catalog data, most customers avail themselves of the cost-effective turnkey services.

The cost for AssetSmart turnkey cataloging services represents a modest investment compared to the cost of other typical asset management functions:

- New record setup (per item).....\$10.00
- Annual records maintenance and support.....\$5.00
- Annual Wall-to-wall inventory.....\$2.00
- Annual average calibration/repair cost\$250.00
- Average annual depreciation cost.....\$1,000.00
- Opportunity cost of (20%).....\$1,000.00
- **Annual Cost of Ownership (per item).....\$2,250+**

AssetSmart structured catalog conversion.....\$2.00 each (one-time)

The average acquisition cost of a typical test and measuring instrument or desktop computer is in excess of \$5,000 and the total life cycle ownership cost investment will triple the initial cost. The annual cost of owning, supporting and maintaining a typical desktop computer, for example, has been estimated at anywhere between \$2,500 to \$13,000 per year by such research groups as the Gartner Group, Forrester Group and Zona Research. Structured cataloging is a cost-effective asset reduction and optimization tool whose time has arrived. Successful redeployment or profitable resale of just a few high-value assets per year will offset the entire cost of cataloging tools and services in most organizations in taking these savings directly to the bottom-line!