

Review: SysTools

Reviewed by Bob Swart

SysTools from TurboPower Software is a helpful 16/32-bit library for Delphi. It isn't a collection of nice visual components, but rather a collection of non-visual but powerful routines! So, you can't install SysTools on your Component Palette, you need to add the units manually to the `uses` clauses of your projects and units.

The package consists of a number of (sometimes rather low-level) routines. Here's a brief overview:

- **Date/time manipulation:** A collection of date/time routines make sure you will have no more problems with leap years or the year 2,000 (SysTools' dates are valid through the year 3,999).
- **String handling:** SysTools actually contains three sets of string routines. One is for the standard 256-byte strings (the old short strings), one is for null-terminated strings (`PChars`) and the third for the new huge `AnsiStrings` introduced with Delphi 2.0. Functions include padding, trimming, encryption, search and replace, filtering, counting etc.
- **BCD reals:** For those of you who need a precision of up to 38 digits (compared to the standard precision of 19 significant digits with the Delphi `Currency` type), SysTools' Binary Coded Decimal type will be a blessing. A number of functions to work with this BCD type are included, eg exponentiation, logarithms, powers, square roots, etc.
- **Container classes:** For those of you who miss the container classes from the Turbo Pascal days (and don't like the new `TList` in Delphi), SysTools offers a collection (pun intended) of collections, such as lists, queues, stacks, trees, bitsets, huge arrays, hash tables, and even sparse collections (for really huge arrays with only a few entries). Don't re-invent the

wheel, but use one from the SysTools shop!

- **Sorting routines:** Using containers is one thing, sorting is another. While some of the containers do sorting automatically (by insertion sort), SysTools also contains an implementation of a combined QuickSort and MergeSort algorithm that is limited only by the amount of disk (swapping) space. You just need to write a function that does the "compare" between two records, which SysTools' sort algorithm will call when it needs to compare records. All the other details are dealt with behind the scenes. And it's fast. I can tell you. No more bubble-sort or re-writes of your own QuickSort, SysTools can sort up to 2 billion records for you and all you need to do is write one little compare function! Records can be almost 64Kb in size for Delphi 1 and up to 2Gb each (in theory at least) for Delphi 2.

- **INI/Registry routines:** If you think you've heard it all, then wait until you see the low-level system routines for INI file and Registry manipulation, copying/moving files, getting system (disk) information, etc. Everything a low-level system hacker dreams about. And it's all there ready to use in SysTools!

Some of these routines overlap somewhat with what we can find in Delphi already. However, with only a few exceptions, SysTools adds new functionality or power to these standard routines, enhancing the things you can do with Delphi in your applications.

Installation

Installation consists of running a single self-extracting EXE file of about 1Mb which comes on one 1.44Mb disk. During installation, you can specify the target (Delphi 1 or 2). SysTools requires only a

few Mb of disk space when fully installed.

The good thing is that SysTools comes with full source code, lots of example programs that show you how to use SysTools, a nice 406-page manual and online help! And no royalties, of course.

Support

SysTools includes free technical support and maintenance updates (by patches). The best way to get technical support is by sending electronic mail. On CompuServe, just GO TURBOPOWER and you'll often get an answer within a few hours! On the internet, check out <http://www.tpower.com> for information on tools, new releases and patches (which can also be found on CompuServe).

As a general remark I'd like to state that, as a user of many of their tools, TurboPower's support is one of the best I've ever experienced in this business.

Conclusions

SysTools is an excellent collection of portable routines for both Delphi 1 and 2. Even if you only use it once or twice, you could save yourself hours of work (and hence money). Even if you think you don't need it and can get away with what Delphi 1 or 2 offers you by default, have another look to make really sure! If you like to re-invent wheels yourself, go ahead; I prefer the TurboPower quality and support that I can find in SysTools. For US\$149, I've got my money back if I save myself a few hours work! And I just can't imagine that SysTools will save me less even before the year is over...

SysTools sells for US\$149, comes with a 60-day money back guarantee and can be ordered direct from TurboPower Software on Tel: +1 719 260 9136, or locally from your favourite tools retailer.