

## **Diabologic: Fireworks!**

by Frank Dolinar

The earliest known fireworks date from the Han Dynasty (220-206 BC) in ancient China.

Firecrackers were made by roasting bamboo to produce the loud sound (known as "bian pao") intended to frighten evil spirits. Centuries later (420-581 AD) firecrackers were used not only to dispel evil but also to pray for happiness and prosperity.

Fireworks today are considerably more complex. Essentially all fireworks displays in the early 21<sup>st</sup> century need computers to identify and control the sequence and launch timing of each individual device.

Today, presenting a fireworks display is intimately related to the issues of organizing and managing the relevant information. Similarly, issues of managing our life and work are intimately related to managing the information, in many guises, that we deal with every day.

At the beginning of 2005, CNN produced a list of the 25 most important (non-medical) innovations of the last 25 years. The top five items on the list are:

- 1) the Internet;
- 2) cell phones;
- 3) the personal computer;
- 4) fiber optics; and
- 5) email

Each of these is a tool for organizing, managing, and transmitting information. All of them are ubiquitous in our daily lives.

My high school advisor taught me that it was more important to know where and how to find the information I needed than to memorize it. This often led me to library reference shelves for the traditional multi-volume encyclopedia, more recently to sets of CDs – such as the Encyclopedia Britannica – with very large compilations of information.

These days, print media and CDs can't keep up with the sheer volume of the information or even just the rate of change of existing files / documents. The mechanisms we have for acquiring data have morphed repeatedly since the Web came into our lives. In 2005, one or another internet search engine is typically our first recourse.

The problem with using the Internet as an information resource isn't how to find content. The mere asking brings back information in torrents, and it's growing by the minute. "Google" has become a household word (even if most people don't know that a 'google' is actually a number).

The real problem with getting information these days is how to limit what we retrieve to the intended topic and to extract useful data from the stream before we succumb to sensory overload – as we often do at the end of a particularly energetic fireworks display.

The amount of information of all kinds, the instant availability, the burgeoning growth, and the constant change of the information make finding and making sense of useful content the problem to be solved.

There's an additional problem.

Unlike centuries-old scrolls, manuscripts, and books, our electronic media is notoriously short-lived – like fireworks. Current information is ephemeral, a characteristic that has been exacerbated by the instant, worldwide communication provided by the Internet. In many cases, there are few safeguards to guarantee the accuracy, precision, verifiability, and timeliness of the information.

A recent development, called the “Wikipedia” (see [wikipedia.org](http://wikipedia.org)), benefits from this speed and suffers from the lack of safeguards. A “wiki” is a web application (essentially a public database) that allows users to add content, as on an Internet forum, but also allows anyone to edit the content. The term “wiki” also refers to the collaborative software that is used to create such a website. Because its users can add to and edit the content, it can grow very quickly and cover many topics. However, since there are no particular safeguards, the information may not be accurate or verifiable. The Wikipedia is fascinating and engrossing, but it leaves itself open to those who – for good or ill – wish to push their particular agenda.

Perhaps we need some form of peer review, or standards, for articles that appear on public websites. Perhaps, in the future, we’ll determine a way of implementing such a process. Until then, we have to be smarter about our research and operate under the guideline “Caveat Emptor” (“let the buyer beware”).

Jiminy Cricket taught me how to spell “encyclopedia”. Today, he’d probably spell it “Google” or “Wikipedia”. Jiminy’s a smart guy. He’d recognize that such information is volatile and has the potential to be inaccurate. He’d be smart enough to use the modern equivalent of asbestos gloves when gathering, organizing, and managing such information.

Just as you would when handling fireworks.