My Primary Research Tools

Your innermost secret to any *Midnight Engineering* venture is to get and stay in *total* control of accurate information flow. By far the best way you might do this is through a creative mix that involves both traditional and web-based resources.

Effective research is very much an attitude. One that is best approached on a total lifestyle basis. Thus, you should always have your required tools and mindset in place long before any specific need ever arises.

Let's look at a few of my research favorites…

Trade journals – Just about any field has its collection of secret insider *trade journals*. These are typically advertiser driven, controlled circulation magazines. They are never found on newsstands and only rarely in a library.

They are usually free to "qualified" subscribers.

Several electronic trade journales do include *E.E. Times*, *EDN*, *Electronic Products*, *Electronic Component News*, or *Electronic Design*. The mechanical trade journals include *Design News* and *Machine Design*.

One highly prolific trade journal publisher is *Cahners*.

These trade journals are incredibly important resources. Besides using their bingo cards to lead you to advertiser's data sheets, ap notes, and data books, trade journals have more or less useful technical articles, annual directories, networking contacts, shows and seminars.

The usual way to get one copy of a trade journal is by use of the *SCAR* technique. Otherwise known as requesting a *media kit*, which usually includes a *sample copy* and *ad rates*. For your own free subscription, you tell them what they want to hear on their qualification card. Their main reason for a "qualification" is to let them meet a cheaper postal rate. All that really matters is your having a potential interest in at least some of their advertisers.

Exactly how do you find out which of these 70,000 trade journals can be of the most help for you? My insider top secret method inolves using…

Ulrich's Periodicals Dictionary – This gem is by far your single most important primary research tool. Bar none. You'll find Ulrich's six volumes on the reference shelf of your local library. Or you subscribe for around $500 per year. Ulrich's is simply an alphabetical directory of nearly all useful magazines, newsletters, and trade journals. Plus companion newspaper and index volumes.

Typical arrangement is by broad subjects. If you know the name of one magazine in your field, chances are the others will appear on nearby pages. CD ROM versions are also available. For greatly improved power searching.

One handy alternate is Oxford's *International Standard Periodicals Guide*.

Alta Vista and friends – There are all sorts of incredibly powerful internet searching services available today. Some (such as *Inktomi*) will go as far as to make up a complete back-indexed model of the *entire* net on their humongous warehouse chock full of coprocessing computers. Starting with the 80,000 most popular pages. These services can be fast, free, and relevance ranked.

Although *Yahoo* offers the highest profile searching, I currently prefer *Alta Vista* as my first choice. You'll find hundreds more of varying usefulness.

The trouble with the net is that an awful lot of the good stuff is not yet on it. Somebody, somehow has to pay for premium materials. And a large percentage of industry is clearly not yet web literate. Shading the points to those that are. Thus, using the net as your sole info source is pretty much guaranteed to be spotty and uneven.

But fast and friendly.

Another problem with most net searches is the *false hit*. Where bunches of totally irrelevant or otherwise low grade materials show up. Forinstance, I recently had "fruitcake manufacturing" crop up when I was looking for "vacuum forming" info. Which is something I always suspected, I guess. Uh, with practice, you can quickly filter the worst of the dregs. At least most of the time.

At any rate, the best way I've found to search the net is with *lookup.com/Homepages/73107/search.html* At last count, they provide for one-stop shopping of the 74 most popular search engines. All on one screen.

Iffen the right one don't get ya, the left one will.

There are also specialized search engines that let you find individual people on the net and their web addresses. Your classic way to find if a domain name is in use is with the *whois* feature of *www.internic.net* Two useful people finders here are *WhoWhere* at *query1.whowhere.com* and the *Domain Finder* at *alfredo.wustl.edu/htbin/whois-cgi*

Just for fun, *Yahoo* has their dice icon which lets you hypersurf somewhere in cyberspace. No telling where you will end up. I have found that hitting this die hundreds of times per month can give you an accurate taste of exactly what the net is all about.

CD ROM Phone Books – There's several brands of these. I personally use *Select Phone* by *Pro CD*. It is a directory of every individual and every business in the US on five CD

disks. PC or Mac. Besides their obvious use of verifying phone numbers, these can be very handy used "backwards" to resolve order difficulties. Or partial addresses.

These should be even handier in the new DVD format, where all the numbers should fit on a single disk.

Data Books – At least for electronics, the data book still remains king. Well temporarily, anyhow. Your free data book library should be a bare minimum of *one hundred* lineal feet long. And never more than three years out of date. You get these data books by aggressive use of those bingo cards and coupons in the trade journals.

Plus aggressive fax and online requests.

The key to quickly getting to the tech info you need is to already have it on hand. Long before you require it.

But data book publication has now become outrageously expensive. You can shortly expect online data distribution and *Adobe Acrobat* based CD ROM disk delivery to almost completely replace the older printed versions.

UMI – Once you know a technical paper exists, how do you get a copy? Once called *University Microfilms*, *UMI* now offers quality reprints of most any technical journal article. Your choice of snailmail, fax, or online delivery. At $12 or so for a typical reprint. The only thing these folks demand is that you know the *exact* journal, title, author, and page numbers of the reprint you want.

For the trickier stuff, *UMI* has created a new service they call *The Information Store*. Here you are more than likely to find those more obscure research reports, conference proceedings, and similar hard-to-find publications.

Copies of industry standards are available through the pricey *Global Engineering Documents*. Federal documents are available in selected larger libraries. There are also a dozen or more *US Government Bookstore* sites you'll find in most larger cities.

Electronic Industry Telephone Directory – Specialized industry directories have long been a mainstay for finding out who makes what. Of these, that EITD from *Harris Publishing* has long served as an essential tool for me. This one is basically your plain old white-pages, yellow-pages printed phone book. Free to insiders, around $50 otherwise.

Most fields offer annual resource directories of one type or another. Other obvious electronic examples include the *EEM Master* and the *IC Master*.

And, of course, there is always the good old *Thomas Registry of Manufacturers*. Hundreds of pounds of oversize volumes at your library. Or as CD ROM.

www.amazon.com – The usual way to find out which books are where has been Bowker's *Books in Print*. Found on the reference shelf of most any decent library. Along with their *Subject Guide* and *Forthcoming Books* companions.

I have yet to locate free online access to any of these. Instead, Jeffrey Bezos' *Amazon Books* at *www.amazon.com* is an even better deal. This online bookshop now lists over a million titles. All instantly searchable on author, title, and subject. Some titles having detailed reviews. And most any book can be instantly ordered at a substantial discount.

I've got an Amazon link on *www.tinaja.com*

About your *worst* possible place to find books is some mall storefront having some "bookstore" sign in front of it. Instead, you'll have far better luck using special interest

direct mail bookstores who stock all of the popular titles in a tightly focused field. Ferinstance, *Navtech Books* for GPS and navigation stuff. Check *Lindsay Publications* for "lost technology" book reprints. Or my own *Synergetics Press* for everything on the *PostScript* language.

Dialog Information Service – This has long been the 500 pound gorilla of research tools. By using Dialog, you can literally find everything on anything. Instantly and on line. From summary abstracts to full papers. World wide. But at charges that may exceed two dollars per minute.

Of the hundreds of superb quality Dialog data bases available, I prefer *Inspec*, *MathSci*, and *Compendex*.

Many of the Dialog premium charge services can now be found free elsewhere on the net. For instance, the crucial *Medline* medical data base is available free at a dozen sites. Cheaper (and rarely free) Dialog access can sometimes be found at schools, libraries, and some larger corporations.

Costly CD ROM versions are also published.

A Few Also Rans – That *Whole Earth Review* with their ongoing series of *Whole Earth Catalogs* have long been my favorite "access to tools" resources. Sadly, they seem to be in even more dire straits than usual, and their future seems in serious doubt. Besides their superb quarterly magazine, you'll find excerpts at *www.well.net/mwec/wer.88.html*

Extensive and well annotated hot links to 1300+ other *ezines* (or online electronic magazines) are offered by John Labovitz's *meer.net/~johnl/e-zine-list*

A useful alternate to Ulrich that covers many thousands of 'zines and labor-of-love newsletters is Seth Friedman's *Factsheet Five*. While utterly fascinating reading, there is guaranteed to be something here to offend everybody. The web site is *www.well.com/conf/f5/f5index2.html*Naturally, *Science* magazine and that daily technology page of the *Wall Street Journal* are essential tools.

As you might have guessed, I find patent repositories to be a totally useless and utterly mind rotting waste of both time and sanity. Your efforts are best spent elsewhere.

A pair of underappreciated library reference tools are the *Encyclopedia of Associations* and that *Science Citations Index*. Trade associations are extremely useful sources of info on who makes what. They will often sponsor tutorials, seminars, and trade shows. The *Science Citations Index* is one of the scant few resources that lets you work *forward* through time. Just start with the horse's whatever docs in any chosen tech subject. This directory leads you *forward in time* to more recent material. Then use the *avalanche effect* on newer authors to pick up the latest and best of ongoing current (and future!) papers.

For More Information

Contact info on most of the mentioned resources appears in the nearby sidebar.

My own *Guru's Lair*, aka *www.tinaja.com* tries to act as a gateway to bunches of web based resources. Annotated hot links to most of the mentioned web sites also appear here. As does the *Synergetics Consultants Newtork*. Where, for a fee, specialists can find out everything on anything for you. However obscure the task.

For more on small scale research in general, check out my *Resource Bin* or my *Blatant Opportunist* reprints. And especially my *Incredible Secret Money Machine* book on

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PRIMARY RESEARCH TOOLS

Bowker Books in Print
121 Chanlon Rd
New Providence NJ 07974
(908) 464-6800

Cahners
275 Washington St
Newton MA 02158
(617) 964-3030

Dialog Info Services
3460 Hillview Ave
Palo Alto CA 94304
(415) 858-2700

EE Times
600 Community Dr
Manhasset NY 11030
(516) 562-5000

EEM/IC Master
645 Stewart Ave
Garden City NY 11530
(516) 227-1300

Electronic Comps News
1 Chilton Way
Radnor PA 19089
(215) 964-4345

Electronic Design
611 Rt #46 W
Hasbrouck Heights NJ 07604
(201) 393-6060

Elec Ind Tel Directory
2057-2 Aurora Rd
Twinsburg OH 44087
(216) 425-9000

Electronic Products
645 Stewart Ave
Garden City NY 11530
(516) 227-1300

Encycl of Associations
835 Penobscot Bldg
Detroit MI 48226
(313) 961-2242

Factsheet Five
R Seth Friedman
PO Box 170099
San Francisco CA 94117

Global Eng Documents
15 Inverness Way East
Englewood CO 80112
(800) 854-7179

Information Store
500 Sansom St #400
San Francisco CA 94111
(415) 433-5500

Intl Std Per Guide
150 Fifth Ave #202
New York NY 10011
(212) 741-0231

Lindsay Publications
PO Box 538
Bradley IL 60915
(815) 935-5353

Machine Design
1100 Superior Ave
Cleveland OH 44144
(216) 696-7000

Navtech Books & Software
2775 S Quincy St #610
Arlington VA 22206
(800) NAV-0885

Science Citation Index
3501 Market St
Philadelphia PA 19104
(215) 386-0100

Select Phone/Pro CD
222 Rosewood Drive
Danvers MA 01923
(800) 992-3766

Synergetics Press
Box 809
Thatcher AZ 85552
(520) 428-4073

Ulrich's Dictionary
121 Chanlon Rd
New Providence NJ 07974
(908) 771-7714

UMI
300 N Zeeb Rd
Ann Arbor MI 48106
(800) 521-3044

US Govt Bookstore
720 N Main St
Pueblo CO 81003
(719) 544-3142

Whole Earth Review
PO Box 38
Sausalito CA 94966
(415) 332-1716

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Let's hear from you. ◆

Microcomputer pioneer and guru Don Lancaster is the author of 33 books and countless articles. Don maintains a US technical helpline you'll find at (520) 428-4073, besides offering all his own books, reprints and various services.

Don has a free new catalog crammed full of his latest insider secrets waiting for you. Your best calling times are 8-5 weekdays, Mountain Standard Time.

Don is also the webmaster of www.tinaja.com where a special area has been set aside for Midnight Engineering readers. You can also reach Don at Synergetics, Box 809, Thatcher, AZ 85552. Or email don@tinaja.com

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