

ACCESS: the theory and practice of Competitor Intelligence

Robert D. Steele

Robert Steele

is a theorist and practitioner of open source intelligence exploitation, and a strong advocate for the re-invention of intelligence. He was recognised as one of the Microtimes 100, "industry leaders and unsung heroes who made a difference in the computer industry in 1992 and helped create the future."

Mr Steele is a veteran of the clandestine service who has also helped manage satellite programmes and information technology projects. He concluded his 18 years of national security experience as the senior civilian responsible for setting up the Marine Corps Intelligence Center.

As President of OSS, Inc, a non-profit international public intelligence clearinghouse, he is responsible for the annual international symposium which brings together intelligence and information professionals from around the world to discuss new sources, methods and tools. OSS Inc also publishes a bi-monthly newsletter, OSS Notices, and a variety of papers and videos which help consumers and producers of intelligence understand the value of private sector contributions to the all-source intelligence product.

We should both distinguish between, and weave together, the strategic, operational and tactical levels of competitor intelligence. If there is not a balanced programme to integrate all three into strategic planning, an organisation may still make a profit, but it will not be the optimal profit of which it is capable. This article addresses three topics:

- 1) The responsibility of CEOs and senior executives for contributing to a national knowledge strategy.
- 2) The opportunity for CEOs and senior executives to establish a competitive advantage at the operational level.
- 3) The opportunity for CEOs and senior executives to exploit existing external private sector capabilities to obtain tactical intelligence.

Let us begin with the tactical, and conclude with the strategic.

Tactical exploitation of the Information Archipelago

My non-profit clearinghouse, and my for-profit services firm, specialise in understanding the knowledge terrain of the world and in helping consumers of information understand that there is a vast supermarket of open sources, systems and services. The pace of knowledge creation is so rapid that those corporations which attempt to maintain very expensive in-house research departments, and to collect vast amounts of information 'just in case', will find that they fall behind, and will also pay a heavy price for the privilege of falling behind.

The secret is to leverage everyone else's overhead. There is a vast array of exceptionally good,



reliable and relatively inexpensive providers of information, investigative and intelligence services in the private sector. It merits comment that the market place, where only the fittest survive, ensures that only the best of these capabilities are sustained, while imposing the costs for failure on someone else.

We must maintain a modicum of in-house talent, especially talent skilled at strategic planning, at understanding the corporation's strengths and weaknesses, at dealing with customers. But by and large, when it comes to creating intelligence about the environment, the customer, suppliers and competitors, for such challenges, an external specialist is often more competent and better connected than an in-house generalist.

In the age of information, the principles of cybernetics rule, rather than the principles of physics — mobility and fleetness of foot have replaced mass as the foundation for advantage. Knowledge workers, 'gold collar' workers, are the core competency which provides sustainable advantage. All the market research in the world is not

going to help if workers are stupid, or badly trained, or unable to access rapidly the knowledge they need to find and keep customers. Tactical intelligence comes from properly training, organising and equipping knowledge workers, complementing their core competency with a virtually unlimited range of external assistance hired when needed.

Before turning to resources external to the corporation, let us address three common tactical errors in business intelligence practice.

First, most companies do not exploit their existing collection resources properly. *Every* employee, and especially those employees who are in direct contact with customers, should have in their position description a requirement to report information, and a process by which to ensure it is entered effectively into the corporations' memory banks. Position description should be reviewed; consider how the insertion of a single paragraph at the beginning, 'Duty Number One: Collection and Reporting of Useful Information', might radically increase the ability to exploit an existing human resource base.

Second, most companies do not have in place a proper mechanism for cross-corporate information sharing. One of the reasons Lotus Notes is doing well is because it is ideally suited to rapidly establishing a minimum-maintenance network of shared files. The old days of compartmented 'cogs' of the machine working in harmony without communicating constantly, are history. Most people are sensitive to this but have not been aggressive enough about changing their information handling tools to facilitate informal corporate wide communication. Corporate wide electronic mail and an electronic directory of position descriptions and office mission statements would be a good start.

Third, most companies store proprietary information on the same computer system as all their other information, including old market surveys and basic demographic and economic information. This has two negative effects. The first is that the proprietary information is not properly protected. If you do not have your proprietary information on a TEMPESTed system with an internal auditing mechanism which monitors access and downloading or printing, then you are not only vulnerable to calculated theft by an employee, but also to remote reading of your computer screens from across the streets. Major banks are starting to realise that some of these international speculators are not just lucky --- they are reading insider information from across the street, or next door. The second negative effect is of isolating the company from the external electronic environment, since it is well-known that external electronic links are an invitation to theft by outsiders. Both are needed: an isolated in-house system for dealing with proprietary information, and free access for employees to the external electronic world inhabited by customers and suppliers.

Let us now sketch this external environment which is so important to success. What may be termed the 'information continuum' is the knowledge terrain within which corporations operate (Figure 1).

It consists of elementary and secondary schools, universities, libraries, all businesses and their information repositories, private investigators and information brokers, the media including the trade journal and scientific and technical media, governments down to the state and local level, all defence and law enforcement organisations, and the official and usually secret intelligence communities. These may be termed the nine sectors of the information continuum.

Every employee, and especially those employees who are in direct contact with customers, should have in their position description a requirement to report information, and a process by which to ensure it is entered effectively into the corporations' memory banks

K-12	Libraries	Private Investigators Information Brokers	Government	Intelligence
	Universities	Businesses	Media	Defence

Figure 1: the Information continuum

INTERNET	Tony Rutkowski Internet Society (703) 648 9888	Brewster Kahle WAIS, Inc., (415) 327 9247	Chris Berendes Internet Navigator (202) 332 2360
UNIVERSITIES	Geoffrey Fox Syracuse 'InfoMall' (315) 443 1722	U. of Michigan Clearinghouse <lou@umich.edu>	Economic BBS Rice University (313) 764 9366
LIBRARIES	Brenda Bailey Uncover Reveal (303) 758 3030	David Bender Special Libraries A (202) 234 4700	Charles Bailey Jr Lib.-Oriented Lists (713) 743 9804

Figure 2

The good news is that this continuum provides a low-cost, flexible and responsive 'virtual research department' of extraordinary power and value. The bad news is that very few people know how to navigate this terrain, or how to break down the iron curtains between sectors, the bamboo curtains between industries, the plastic curtains between individuals. Simply improving an employee's ability to access his or her own corporate information is the first stage on the road to corporate health in the age of information. Giving the employee the ability to access other employees, customers and information through electronic mail, is the second stage. The final stage is the creation of a 'virtual intelligence community' that is available when needed, and which does not cost money or effort when it is not needed.

Now we turn to some tactical specifics, representative examples of capabilities that should be used today. Where they are not being used, the best business intelligence possible is not being achieved. The tables which follow, and the explanatory information, are part of a package prepared for *Time Magazine* in support of a planned cover story on 'Private Spies'. I was concerned because *Time* was making the same mistake many corporations do: assuming that private investigators are the core external resource for industrial espionage and competitor intelligence. They are not; not only are they the most expensive, but they are also the most likely to cause major problems if they run out of control and are caught doing something stupid. The three firms included in the matrix are the best US firms that could be identified. Many people will need their services on occasion, and these three firms know how to operate without getting cli-

ents into trouble. It should be stressed, however, that reliance on a single provider of information services is no better than having an in-house capability; the greatest returns on investments in tactical intelligence will come with the ability to 'mix and match' sources and services from across the entire information continuum, hiring the very best experts on very narrow topics for only as long as needed, but with the assurance that the information they provide is first-hand in-depth, and not only current, but in fact ahead of the published record.

Tony Rutkowski, Executive Director of the Internet Society, also oversees publication of a professional journal loaded with information about resources on the Internet, and understands better than most the technical issues associated with making global information available to any business.

Brewster Kahle, formerly with Thinking Machines, is the genius who invented the Wide Area Information Server (WAIS), which is now a standard for rapidly searching the entire Internet for weighted (relevancy ranked) full text documents. Brewster can tell you what businesses are doing to take advantage of the Internet, including their collection and search strategies.

Chris Berendes is a Master Inter-naut whose specific expertise is seeking out scientific and technical information of business value from all over the Internet.

One comment on the Internet: it eats people. It is much better to have a single Internet specialist, or to contract out searches, otherwise employees run the risk of either becoming hopelessly lost,

One comment on the Internet: it eats people. It is much better to have a single Internet specialist, or to contract out searches, otherwise employees run the risk of either becoming hopelessly lost, or hopelessly addicted to wandering in cyberspace.

or hopelessly addicted to wandering in cyberspace.

Geoffrey Fox is the man behind Syracuse University's 'InfoMall'. This is a good example of a university recognising that it can substitute support to business for declining students as a source of revenue. He provides multi-media 'intelligence' to businesses.

University of Michigan Clearinghouse for subject-oriented Internet resources is a classic example of graduate students doing something useful for the business community. Among the directories they have prepared are ones for aerospace engineering, government sources of business and economic information.

Economic Bulletin Board Service operated by the University of Michigan provides a number of useful files including statistical information, press releases from the US Trade Representative, defence conversion information, East European trades leads, etc.

Universities, especially now that they are confronted with declining student populations, have a very important role to play in the provision of practical tactical intelligence support to corporations. Adopt a university, harness the brainpower of its graduate students and the connectivity and power of its electronic resources.

Brenda Bailey at Uncover Reveal is the tip of the Colorado Library Association that may put some of the commercial online services out of business. They are using existing library over-

head to index and abstract, and then supporting their library services through on-demand faxing of materials for which fees are charged.

Special Libraries Association takes care of the many corporate and academic special libraries, and in essence nurtures a wealth of information that is not mainstream but is very much at the heart of national competitiveness. They are the private intelligence service for esoteric issues. They have been in existence for over 84 years, and specialise in helping librarians tap into international corporate libraries and other specialty collections.

Library-Oriented Lists on the Internet were put together by Charles E. Bailey, Jr. He is Assistant Director for Systems, University Libraries, University of Houston. He is Co-Editor of *Advances in Library Automation and Networking*, and Editor-in-Chief of the *Public Access Computer Systems* review. He understands the role libraries have to play in national competitiveness, and the importance of networking.

David Young founded Oxford Analytica, and this is the finest global intelligence service that is open and private. He was a National Security Council staffer with Kissinger, and decided he could do better than what CIA was providing to the President. He enlisted some dons at Oxford, and now provides the business community with daily intelligence and special reports that have earned praise from the World Bank and others.

WONG Chiu-Yin runs the Economist Intelligence Unit, based in London and New York. The

Adopt a university, harness the brainpower of its graduate students and the connectivity and power of its electronic resources.

BASIC BUSINESS INTELLIGENCE	David Young Oxford Analytica +44 (865) 244 442	Wong, Chiu-Yin Economist Intell Unit (212) 554 0600	Joseph Casitore FIND/SVP (212) 645 4500
ADVANCED BUSINESS INTELLIGENCE	Ruth Stanat SIS International (914) 639 1934	Herb Meyer RWI, Inc. (206) 378 3910	Dick Klavens SCIP (215) 896 4859
BUSINESS CONSUMERS & EXPERTS	Tom Sheer Grace Company (407) 362 1934	TELTECH Experts on Demand (612) 829 9000	BEST America Experts on Demand (410) 563 2378

Figure 3

unit provides intelligence reports and special consultations to businesses world-wide, and there is a good reason why it is called an Intelligence Unit.

Joe Casitore is the Vice President for New Business Development at FIND/SVP in New York. This international firm will obtain any published document, including 'grey literature' (documents published in limited numbers by private parties, but neither classified nor proprietary). FIND/SVP also runs an 'ask any question' service that is a mainstay of the private intelligence business, and it also has a strategic research division.

Ruth Stanat represents the best of the new business intelligence breed. She has an international company with correspondents all over the world, and she does a fine job of both market research and forecasting. Together with Herb Meyer and Kirk Tyson in Chicago, Ruth is among the best in the privatisation of intelligence. David Young is my hero because he has a network of 750 agents worldwide, and does intelligence every day about every topic; Ruth does research on demand, and is also the author of the excellent book 'The Intelligent Corporation: Creating a Shared Network for Information and Profit'.

Herb Meyer is an example of a 'private spy' (in the new sense, not the old sense). He was editor of *Fortune*, then Vice Chairman of the National Intelligence Council, and is now CEO of Real World Intelligence, Inc. He is the author of 'Real World Intelligence: Organised Information for Executives'. Herb is a success story, and he has translated lessons learned in the classified intelligence community into a competitive advantage in the private sector.

Dick Klavens is the President of the Society of Competitor Intelligence Professionals (SCIP). These are the people whose specific job it is to collect, process and disseminate corporate intelligence. They are the 'in-house' managers of corporate-wide collection plans, cross-business unit intelligence sharing, and — when needed — the hiring of external information brokers, telephone surveyors and the occasional (rare) private investigator. Their annual symposium, together with that of AGSI and that of OSS, are

'must attend' events for anyone who wishes to be competitive in the information age.

Tom Sheer at the Grace Company has a well-organised corporate intelligence systems, one which optimises in-house assets. Tom is the (very special) Assistant to the President.

TELTECH Experts on Demand is part of the business intelligence community, but can also tell you about its customers. TELTECH has 3,000 technical experts on call, and can put a customer in touch with one over the telephone, with the result that 'real-time intelligence' is produced when needed.

BEST America is similar to TELTECH, only it has 40,000 experts on line, and specialises in the life sciences. Pharmaceutical companies pay serious money to be able to reach out and tap into very narrow expertise on a moment's notice and with the assurance of total discretion.

We have considered using capabilities better, and will now turn to the subject of external experts. This is important, since anything that is printed is by definition out of date. Books are seven to ten years out of date, articles are 7-10 months out of date, and even daily newspapers stories are a few days old. In the age of information, when speed is a factor in competitiveness, one can get ahead of the mainstream by using experts to create information and hand it over before it is published. Any market research which does not commission original thinking and include some telephone surveys with real people is not optimised for advantage.

Kroll Associates (New York) has received publicity as a leader in offering trade secret protection and related business intelligence services. Across the private investigative and 'executive services' community, Kroll is a constant when credible, reliable, international capabilities are discussed.

Fairfax Group (Washington, D.C.) provides a range of services from financial investigations of takeover targets to debugging of offices and handling of ransom negotiations for executives.

Parvus-Jerico (USA-Bermuda) is run by Jerry Burke, former Executive Director of the Presi-

PRIVATE INVESTIGATORS	Kroll Associates (New York) (212) 319 0044	Fairfax Group (Washington DC) (703) 207 0600	Parvus-Jerico (USA-Bermuda) (301) 589 4949
INFORMATION BROKERS	Reva Basch Aubergine Info. (510) 527 5770	Sena Sharp Sharp Information (310) 379 52179	Helen Burwell B. Enterprises Inc. (214) 732 0160
DIRECTORIES	Olga Staios Lexis / Nexis (513) 865 7312	Elizabeth Aversa ISI (410) 997 3745	American Business Lists (402) 592 9000

Figure 4

dent's Foreign Intelligence Advisory Board in the USA, and does especially well in the Caribbean and Latin America.

Reva Basch. Author/editor of *Secrets of the Super Searchers*, is widely regarded as a world expert online searcher. A founding member of the Association of Independent Information Producers (AIIP), Reva has a strong commitment to ethical guidelines, and believes that the best business intelligence can be acquired legally and ethically at relatively low cost.

Seena Sharp is one of those hard-core New York sharpies transported to California, with a great sense of humour and the ability to do whatever it takes (legally) to get you what you want. She also is one of the founding members of the AIIP.

Helen Burwell is the best organised of the independent information brokers, and publishes the *Burwell Directory of Independent Information Brokers*. Information brokers are special people. Most companies make the mistake of using a single broker, when in fact there is an entire range of brokers who specialise in very specific areas. Helen's directory is a window into this global community.

LEXIS/NEXIS, besides being a good all-around tool for research, is a good way of finding those journalists and professionals who are thinking about and publishing the latest developments in specialised areas of interest.

Institute for Scientific Information publishes the *Social Science Citation Index* and the *Science Citation Index*. It also does some interesting work in citation analysis of emerging scientific

and technical directions, and can do special studies on demand.

American Business Lists integrates 4,900 Yellow Page directories and 500 Business White Page directories, adds annual reports and other SEC information, integrates mail surveys and news clippings as well as postal data, and then follows up with a claimed 14 million telephone calls to verify the data. The service allows selection of records by type of business, yellow page heading, SIC code, employee size or sales volume, geographic area and radius, franchise or brand, newness of business, and other mixes. Output can be provided as magnetic tape, diskettes, 3 x 5 cards, or online.

This concludes the overview on tactical aspects of competitor intelligence as an element of corporate competitiveness.

Operational concepts, policies, and practices

At the operational level, which deals with top-level guidance of over-all corporate efforts, rather than the specific research tasks common to the tactical level, we can begin by drawing a distinction between capabilities, consumers and environments — 'competitor' intelligence is inadequate and misguided as it is generally practised because it focuses on watching competition and trying to beat it through mimicry.

- Understanding the competitor is the least important objective
- Understanding future customers and future opportunities is far more important. If you

are not leading the pack, you are eating someone else's dust

- Understanding current and projected environmental realities is the foundation for finding those constantly changing points at which one can buy low and sell dear — the foundation for profit.

There are some core concepts at this level which will be discussed briefly before concluding with a strategic overview. More detail about these concepts and the general theory and practice of intelligence is contained in my paper, 'ACCESS: Theory and Practice of Intelligence in the Age of Information'.

Decision-Support is the only acceptable mission for competitor intelligence. One must carefully distinguish between *data*, which are found in the raw text, image or signal; *information*, which is collated data of generic interest, such as newspapers or research reports; and *intelligence*, which is information that has been tailored to support a specific decision by a specific person about a specific topic at a specific time and place.

Collecting Secrets is not difficult if you focus on collecting them before they become secrets. The weakest link, and the cheapest and easiest to exploit, is the grey literature and human infrastructure responsible for doing research just before someone decides to label something proprietary or classified.

Cast a Wide Net. The French steel industry worked very hard at competitor intelligence against other steel industries, and completely overlooked the plastics industry, which was busy developing steel substitutes.

Openness versus Secrecy. The openness paradigm has won. The example of the nuclear industry, based on secrecy and not very progressive, is instructive when compared with the openness of the electronics industry, where competing engineers compare their approaches over coffee.

Just in Time versus Just in Case. Paul Evan Peters, Executive Director of the Coalition for Networked Information, makes the point that in the age of distributed information easily acces-

sible through electronic connectivity, it makes no sense to store volumes of out-of-date information when you can reach out and get exactly what you need in the way of current information on a 'just in time' basis.

Diamond versus Linear Paradigm. The old paradigm for information acquisition is the linear model, where the executive goes to the analyst who goes to the collector who goes to the source, and then back up the chain goes the answer. This paradigm is not only too slow, it is not workable when you have a fast-moving topic with many nuances that are difficult to communicate to intermediaries. The new paradigm is the diamond paradigm, where the executive talks to the analyst, the collector, and on many occasions the source, in order to ensure there is a timely and accurate meeting of the right minds.

CIO = Corporate Intelligence Officer. The last person who should be appointed to the CIO position is the old information systems expert. They are technicians and do not have the necessary understanding of corporate strategy and the needs of senior executives for real-time content displayed in meaningful ways. The CIO position should not only be responsible for ensuring that the entire corporation — every employee — serves as a collection network, but also for ensuring that the information in hand is exploited, and that the corporation has the broadest possible network of external collection and processing capabilities on demand.

Information Value: content + context + time. Corporations and banks have a wealth of information that is rotting away unused rather than being bartered or made available to one another as a means of increasing the competitiveness of an industry or a country. If one understands that stripping information of time and context allows it to be bartered without losing a competitive advantage, while gaining additional information in the process, then the way is open to operational-level agreements which will increase an individual firm's competitiveness as part of a larger consortium.

Information-Driven Actions are better than mission-driven actions. Many corporations appear to be mired in old organisational practices where a business unit is given a specific series

of tasks to accomplish, and is then expected to accomplish those tasks over and over again without reference to the external environment or other elements of the corporation.

Corporate Hive. Every employee is a collector, producer and consumer of intelligence. Drivers of delivery vehicles, service technicians, those responsible for cold calls on customers, all should receive special training in observation and elicitation, and should have easy-to-use channels and processes for reporting what they see and hear.

In brief, organisations should be thought of as information networks, with each employee being in turn responsible for exploiting those external information networks with which they come in contact — the market research or competitor intelligence shop should be a collection manager and presentation manager, rather than a basic research function — this shop should be a personal tool for mobilising the entire corporation, and leveraging everyone else's capabilities.

Influencing the Strategic Information Environment

The reality is that despite the plethora of information that is available today, it is badly organised, difficult to access and of mixed reliability. The 'information commons' have been flooded with sewage to the point that it is difficult if not impossible to graze animals on the commons. Individual corporations cannot be optimally competitive in this environment, but neither can they change this environment by themselves. Concerted action, led by the government but not controlled by the government, is required.

Information Age. We are deep into the Information Age, an era in which information is not only a substitute for time, space, labour and capital, but also an era in which a small amount of information — the right information delivered to the right person at the right time — can have extraordinary military and economic implications.

Electronic Arms Race. There is an arms race going on in 'cyberspace', in the electronic frontier, and the United States of America, as well as many other countries, are not competing . . . at

the same time that a few countries such as France, Sweden, Israel, Japan, Singapore, India and Taiwan are creating 'orders of battle'; global entrepreneurs with no national loyalties are making billions through electronic crime; and the Russian, Chinese, Vietnamese, Japanese and Korean criminal organisations are making major head-way in building their war-chests for future electronic and common crimes.

National Information Strategy. In the Information Age national power comes from a nation's 'information continuum', from the full integration and mobilisation of its universities, libraries, businesses, information brokers, media, government, defence and intelligence resources. Such a continuum supports national security and national competitiveness only if there is a national information strategy, just as we now have a national security strategy. Not having an information strategy, and an information 'order of battle', in this era, would have the same consequences as if we had not had a strategic nuclear and conventional capability during the Cold War.

Four Elements of an Information Strategy. The four elements of a national information strategy are connectivity (such as is now provided by the National Information Infrastructure (NII) initiative); communications and computing security (which does not exist and is an Achilles Heel); voluntary co-ordination of research and development across government and private sector lines, and especially information technology research; and content, the orchestration of public access to the vast quantities of substantive information now isolated in the disconnected, insecure, non-interoperable databases of institutions across America.

- *Connectivity* is important within a corporation, between corporations in the same industry, between corporations and affiliated universities, and between corporations and every other organisation in the international information continuum. If you are not connected to the larger electronic community, this is the same as not having telephones.
- *Communications and Computer Security.* We live in a house built over a sinkhole! The vulnerabilities of any national telecommunications infrastructure, or any corporate

The reality is that despite the plethora of information that is available today, it is badly organised, difficult to access and of mixed reliability.

telecommunications and computing infrastructure, are frightening in the extreme. Interruption of services, destructions, degradation and theft of data are all going on today, and are likely to cost unwary corporations a great deal in the years to come. One can predict increasing electronic attacks on specific corporations and banks by financially motivated individuals who understand that they can make millions of dollars through the remote theft of insider information, or the destruction of a company coincident with their betting short on that company's stock.

- *Co-ordination of Research and Development.* The amount of waste across government and private sector organisational lines, when it comes to information technology and information handling processes, is extraordinary. My personal estimate is that in the United States of America roughly two billion dollars a year are wasted by many different organisations, each spending ten million or so a year to create the ideal analysts workstation. This is a generic multimedia handling requirement. It should be a common project which seeks to raise the common denominator for desktop services across an industry if not a nation.
- *Content* contained in the soft and hard files of the many organisations comprising the national and international information continuum can have a beneficial effect on competitiveness and prosperity. Financial incentives must be offered by the government to help universities and businesses, among others, transition into an era where

distributed information is the norm, rather than the exception. By nurturing distributed centres of excellence in topical and disciplinary areas of common interest, the government can help build an 'information army' well suited to protecting the national security and national competitiveness of its homeland.

Conclusion

Competitor Intelligence is mis-named. Business intelligence — if properly understood as *decision-support*, and if understood to emphasise the environment as well as the consumer, not simply competing business units — is vital to the competitiveness of every corporation.

Every Chief Executive Officer has an opportunity to refine business intelligence capabilities, first by ensuring that the collection capabilities of employees are harnessed, and that employees have access to information available within the corporation; second by ensuring that operational policies and activities reflect a good understanding of the new principles of business management in the information age; and third, by using corporate influence to create industry-wide and nation-wide policies and capabilities which increase the robustness of the 'information commons' and bring to bear the full power of the national information continuum on behalf of the corporation's competitiveness.

The author is at: OPEN SOURCE SOLUTIONS, Inc. 11005 Langton Arms Court, Oakton, Virginia 22124-1807, USA. Internet: @oss.net

