

TO DEMONSTRATE THE NEED FOR AUSTRALIA TO DEVELOP A STRATEGIC POLICY ON OPEN SOURCE INFORMATION (OSI) WHICH CAPITALISES ON EMERGING TRENDS

by

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ABSTRACT

This paper presents an Australian view of the development and trends in Open Source Information (OSI). An examination is made of the recent proposals in Sweden and the USA, for comparison with Australia. The paper may be considered as a working document, for it considers Australia in isolation and also in a global context, to discuss the need for a national policy on OSI.

BACKGROUND

Information is the life-blood of every organisation (Hamilton:1979)

Knowledge is power (Steele:1991)

Information and Intelligence

Information is readily accessible to the individual than ever before. Technology makes it so. Computer CD ROMs (Compact Disk Read-Only-Memory) full of information are freely available, at low cost and full of information. Each has the capacity of about 550mbs (mega-bytes) of memory, the equivalent of approximately 125,000 pages of A4 paper full of text (double spaced).

Everyone uses information in some form or another. The major user of information, for example - in planning Australia's future, is the government.

Government organisations, corporations and businesses make calculated decisions based on processed information. This is often referred to as "intelligence". Information is the basic commodity of all types of organisations, including any intelligence organisations which are the professionals at handling and processing information.

Intelligence is that which confers an advantage

(Colonel I.G. Ferguson - Director of Military Intelligence 1991.)

Post Cold War all intelligence organisations are undergoing a re-evaluation. Their roles, tasks and targets are changing.

The type of information that they collect and hold, their accountability, their funding, their efficiency and effectiveness, are all under examination. To justify their continued existence, some intelligence organisations have welcomed a shift of focus from the previous military and political targets, to the industrial and economic. These formerly "dark" intelligence agencies, can now be seen to openly support their country's economy and developing technology, and "come-out" from behind their dark past. (Castro:1993)

In the past, the majority of information was classified because of the means of collection. However, it has long been recognised that 80%, or more, of the information collected by intelligence agencies is freely available open source information (Stiller cited by Steele:1993).

Society has already changed as a result of new ways of handling information. The information explosion has given birth to new industries that deal only with information. These information brokers now address the needs of the corporate world, offering a service to locate and supply quality information.

The use of Open Source Information (OSI) from commercial information brokers by the intelligence community will lead to Open Source Intelligence (OSINT). This should reduce costs, and result in a better product from those intelligence organisations who use such services.

Information management has pushed its way out from behind the shell of computing. The focus is now on the mass of databases which are publicly

accessible. It has been suggested that this is the beginning of a new age of importance in information management. Alvin & Heidi Toffler (1993) in *War and Anti War* mention a document released on May 6, 1993, by the office of the U.S. Joint Chiefs of Staff:

This Memorandum of Policy No. 30 defines command and control (abbreviated as C2), as the system by which authority and direction are exercised by legitimate commanders. It defines command and control warfare as the "integrated use of operations security...military deception, psychological operations...electronic warfare...and physical destruction, mutually supported by intelligence, to deny information, to influence, degrade, or destroy adversary C2 capabilities, while protecting the friendly C2 capabilities against such actions". Properly executed, the report declares, command and control warfare "offers the commander the potential to deliver a **KNOCKOUT PUNCH** before the outbreak of traditional hostilities."

The memo further explains the official parameters around the concept of information warfare by placing more emphasis on intelligence, and by extending the scope of information management to include psychological operations aimed at influencing the "emotions, motives, objective reasoning and ultimately the behaviour of others."

In the same book, a London-based information scientist and military analyst for Forecast International, Stuart Slade, points to another, deeper political implication for the new command, control and communications systems:

Not every army in the world is culturally or politically (let alone technologically) capable of using them. "These systems," he explains, "depend on one thing - and that is the ability to exchange information, to swap data, and to promote a free flow of information around the network, so that people can assemble their tactical pictures, they can relate their stuff together. What we have actually got is a 'politically correct' weapon system. **Societies that freeze the flow of communications, the free flow of ideas and data, will not, by definition, be able to make much use of systems...**The Iraqi system is a tree...(where every intention and suggestion has to be approved by the 'Supreme Commander' before it can be carried-out)."

Since advanced networks permit users to communicate among themselves at all levels of the hierarchy, it means that Captains can talk to other Captains, Colonels to Colonels, without the messages all going to the top of the pyramid. But this is precisely what totalitarian presidents and prime ministers may not want. "There are quite a few countries," Slade suggests, including China, that would find such a system politically dangerous. This is why, he believes, the new communications (information) networks favour democratic nations.

As a result of the changes in information management (e.g. the structure of command and control systems), the ever increasing amount of open source information that is now available, and the trends towards a more open approach, it is now time to formulate a new view of information. Consideration should be given to establishing a national information management strategy; one based on open source information.

EXAMPLES FROM TWO COUNTRIES

Never before has the intelligence community focused so directly on the need to take greater advantage of commercial information services. It is my belief that a new relationship between government and the private sector's information brokers is going to emerge as a positive outcome of our current fiscal crisis. (Steele: 1992)

Last year in the United States, Robert D. Steele, a veteran of the Marines and government intelligence organisations, founded the non-profit Open Source Solutions. In December 1992 the organisation put on the first symposium on National Security and National Competitiveness: Open Source Solutions (Microtime:1993).

The presenters included people from Los Alamos, Jane's Information Group, and the EFF (Electronic Frontier Federation); as well as representatives from the well known government intelligence and security agencies. The conference has raised awareness within the intelligence community of the value of OSINT. This is evidenced by articles in such publications as the American Intelligence Journal (Spring/Summer 1993). The authors are an impressive list from the "Who's Who" of the US intelligence community. They include Admiral William O. Steadman, Deputy Director of CIA; Mr Denis Clift, Chief of Staff of the Defence Intelligence Agency (DIA);and, The Honourable Dan Glickman, Chairman, House Permanent Select Committee in Intelligence.

The innovative ideas of Robert Steele have become the catalyst to develop the concept of using Open Source Information.

Cris Castro (1993) in his address at the 23rd EDPAA/CACS Conference in Florida states that the NSA (National Security Authority) "considers the (major players) worst offenders in stealing corporate information to be:

China	- most aggressive
Russia	- most active
France	- most notorious
Israel	- most diverse
Japan	- most overt
Sweden	- best newcomer
Switzerland	- best newcomer
United Kingdom	- most successful"

It is interesting to note that Sweden has been given the honour of "best newcomer". Four points were raised by Stevan Dedijer and Hans Hedin (1993) in a paper titled *The state of the National Intelligence and Security Community of Sweden*:

(The paper was written at the request of C. Harboulot, INTEL CO, Paris, "to be included in a survey of World Intelligence and Security being prepared for the Government of France and aiming to develop the Economic Intelligence study in that country.")

Dedijer and Hedin state that all developed countries including Sweden, are facing four closely related problems in Intelligence and Security.

First, how to develop an effective National Intelligence and Security Community involving all sectors of society.

Second, the conversion of intelligence...as the trend continues from military and security to economic, technological and social development.

Third,...how to eliminate the bureaucracy ("mind-set") ingrained by the Cold War.

Fourth, the university education of personnel in government, industry, and other institutions to adopt an Intelligence and Security Approach.

The paper continues by explaining how it is seen that Sweden is addressing each of the four problems presented above:

1. That, up to now, there is no evidence of a National Intelligence and Security Community in Sweden.
2. In 1992 the Swedish military attempted to tackle the problem of conversion of intelligence. ("Conversion" in this context is taken to refer to the merging and re-focusing of corporate and government data.) They held a series of seminars to share and merge the military and government approaches (in Intelligence and Security) with those of the corporate sector.
3. One way to eliminate a bureaucracy "mind-set", (e.g. "reds under-the-beds!") is to develop a national awareness of the problems associated with Intelligence and Security. Sweden has a national and widely read Security and Safety Journal, and reports indicate that there is a growing cooperation to develop an Intelligence and Security approach to all their activities.
4. In academia, the major part research and studies in Intelligence and Security continues at Lund University School of Economics.

From discussions with colleagues around the world, it is also becoming apparent that Israel and Japan are also showing an increased interest in developing an effective National Information Doctrine for all public and private sectors.

THE SITUATION IN AUSTRALIA

The situation that we have in Australia, may be compared to that in Sweden. The same areas are considered as those above.

1. Developing a National Approach to the use of OSI

Whilst it may appear that Australia has little to show in terms of the development of a national approach to handling information (a National Information Community), there are signs which indicate a beginning.

- The most recent indicators have been the development of conferences that link military and intelligence organisations with the corporate world (viz. The 1st International Conference on Defence and the Media in the Time of Limited Conflict - February 1991, Brisbane).
- The pressure on funding and justification has led some Australian Intelligence and Security Organisations to offer their services commercially. The APS (Australian Protective Service) now offer a range of services.

- The recent development of professional bodies in Australia like the Australian Chapter of ASIS (American Society for Industrial Security); and AIPIO (Australian Institute of Professional Intelligence Officers) which provides a forum for members from the corporate and government organisations to meet and exchange ideas.
2. **The Merging of Intelligence from Various Sources**

It is only through the cross-pollination which occurs during conferences and meetings, as outlined above, that common-ground is found to merge corporate and government data. This can be seen to a limited extent with the development of several companies in Australia that deal in imagery. This information tends to be a one-way pass, rather than a "two-way street"; but it does illustrate a public availability of information which was formally denied.

3. **Eliminate Bureaucracy**

Dedijer and Hedin (above) specifically target the need to "eliminate the bureaucracy that exists in the organisations", and Steele (1991) mentions a list of the "sins" that relate to strategic intelligence that are broader in outlook. One of them is the "Mindset Inertia" which he explains, is:

"...having senior bureaucrats and appointees insisting that we maintain our traditional priorities against the Soviet Union..", and how

"It will continue to be difficult for our policy makers and senior intelligence managers to focus on the need for changed priorities because of our (USA) intelligence and foreign affairs communities are at least two-generations away from fully understanding the Third World and dimensions of change outside the political-military and transnational economic environment. We do not have an adequate methodology for studying the preconditions and precipitants of revolutionary change (including ideo-cultural, techno-demographic, and natural geographic change), and no indications and warning capability suited to this challenge."

"Our entire intelligence structure (USA), our designs and methods, do not lend themselves to being reconstructed and reconstituted. It is as if, after decades of learning how to build Cadillacs, our very fine Cadillac, accustomed to travelling on the same super-highway back and forth, must suddenly be taken apart and put back together as an off-road vehicle able to deal with the treacherous terrain and back-roads of the Third World. It is obvious that we not only need to pay much more attention to different "designs and methods", but the fastest way to create our off-road vehicle, given our lack of resources, is by melting down and recasting portions of the (intelligence) community in their entirety."

Australia is guilty of the same "sins", but not to the same extent. By virtue of geographic and political positions, Australia's focus has not been as preoccupied to the USSR as our allies. However, the country has a similar "mindset" towards other countries in our area of strategic interest.

The nature of intelligence organisations in Australia is, such that:

- They become guarded about sharing information with one another reflecting a typical bureaucratic "mindset".

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- Bureaucracy has also forced different standards between similar organisations, viz. security clearances. This has led to different attitudes between organisations, which have become entrenched, smothering opportunities to establish a common ground, and to share information.

4. Academia and Education

For some time, many universities and institutions in Australia have offered subjects in business intelligence.

These subjects form a minor part of degrees in various disciplines. The subjects are narrow in scope and they deal only with the corporate sector, in the strictest sense of the word.

In the last three years, four or five institutions have offered courses that specialise in intelligence and security. The most comprehensive program is at the Queensland University of Technology (QUT). The first group of students from the three-year degree program will graduate this year.

Students in the Bachelor of Arts (Justice Studies) degree program (Faculty of Law - Kelvin Grove Campus) can major in Intelligence and Security. (The three members of staff, who have developed these courses, have over 45 years of intelligence and Security experience between them.) There are eleven different subjects to choose from. An external "CPE (Continuing Professional Education) Certificate in Security & Intelligence" is also offered, and there are plans to offer a Graduate Certificate, as well as Masters and Doctorate programs.

QUT prides itself on being "a university for the real world", and on being able to "sell its product". This approach reinforces the process of building a National Intelligence and Security Community.

In light of the four areas preceding, it can be seen that when compared with Sweden, Australia has already advanced towards the formation of a national approach to using OSI. It is therefore a logical step that Australia should consider a doctrine for information, at a national level.

AUSTRALIA IN THE GLOBAL CONTEXT

This paper contends that Australia's ability to enhance its influence in the world would be greater if it had an information policy. Information may be considered as an additional component to the constituents of National Power.

Papp (1984) describes power as "the ability of any international actor (country) to be able to persuade, influence, force or otherwise induce another international actor to undertake a policy or change an objective that the latter would prefer not to do."

He also states that the constituents of National Power are:

Population - "one of the most important"

"Here population refers not only to numbers but also the training and expertise of that population...Indonesia has a population of 160 million, but its internal organisation and leadership have failed to coordinate its human and material resources effectively..."

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Geography - "its importance remains a matter of debate"

"Size, terrain and location need not be advantages, for example consider the USSR."

Natural resources - "are the third element of power"

"At least four levels of importance - possession, exploitation, control and use - may be attached to resources... Use is primarily a function of an actor's level of industrial and economic development."

Industrial capabilities - "are also major inputs to a country's power potential"

"...the record of the nineteenth and twentieth centuries indicates that countries with superior industrial bases and the wealth to support those bases generally become victorious in war."

Military capabilities - "plainly important to a nation's power potential."

"...some analysts of the role of power in international affairs have gone so far as concluding that military capabilities are the only real determinants of an actor's true power. This is an extremely narrow outlook that may be legitimate during time of war, but is overly restrictive during peace. Japan, for example is militarily weak because of its constitutional restriction on armed forces, but it is a powerful country in economic terms."

"Will...indeed many analysts rank will as one of the most, if not the most, important determinants of power. Without will even a massive state-of-the-art military can achieve little."

Leadership - "plays a major role in establishing will"

"...and often influences how well an actor takes advantage of other parameters of power. Leadership may be either jointly managed or undertaken individually, but in either case it is the key. Particularly during peace and prosperity, decision makers often prefer leadership roles to be widely shared, or at least have the appearance of being widely shared...in all cases effective leadership abets power."

Internal organisation - "a constituent of power."

"An actor whose internal organisation is rigidly stratified or which disperses too many economic or non-economic rewards to too few of its members may reduce the allegiance of its people to that actor."

The role of strategy - "a subject of considerable debate"

"...that part of the political decision-making process that conceptualises and establishes goals and objectives designed to protect and enhance...interests in the international arena....The manner in which leadership organises and directs capabilities towards a specific goal can add or detract from an actor's power as much as any of the other parameters of power (above)... Capabilities without strategy are nearly as meaningless as strategy without capabilities."

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Perception - "the final major input"

"As power is both a relational and a contextual concept, its utility lies not only in what it can do, but also in what others think it can do."

Papp adds as a conclusion, that measuring power is more of an art than a science. Given the relative nature of power, the contextual quality of its application, and the difficulty of assigning an objective value to even its most tangible elements, it is therefore still difficult to "pick who is where on the ladder of power".

In measuring power, it has been traditional to weight military power high on the list.

The relative weighting has now changed, economics is now the dominant force, and change continues at an accelerating pace.

This paper proposes that Information and Technology should be added to the list. They will become increasingly more important. Hence the need for a coordinated national approach which is best reflected in a policy.

It is nearly ten years since Papp wrote about the constituents of power. Australia can no longer consider maintaining the rank order which he presents; even his constituents of power need reviewing. The emphasis is now on change, and in the context of this paper, at least **TWO** more constituents may be added: **Information and Technology**. We must consider how they impact on the relative importance of economic change.

Perhaps we may consider that Information and Technology reflect economic strength, and therefore should be placed at the top of the constituents list? This is because, in the very near future, information brokerage will be a major activity and will give considerable leverage to those countries, organisations and individuals who practice it.

We may consider that where military alliances were important in the past, in the future it will be "information alliances".

What should Australia Develop as a Strategic Policy?

Internally

For the reasons, already presented, that deal with the development of a national approach to using OSI, we should consider (at least as a starting point) similar suggestions to those that have been proposed by Steele (1991) in the United States.

- Foster the concept of a national approach to using OSI.
- Establish a Senior Inter-Agency Group tasked with directing resources towards a world-wide system by dealing with multi-level security-access.
- Use a Corporate Information Management initiative to explore inter-agency solutions and mechanisms to fully integrate open source and unclassified databases into a world-wide structure.

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- Establish a National Information Agency (NAI) to coordinate existing public sector entities including those that are currently not recognised as external intelligence providers. (viz. commercial broadcasting.)
- Establish an Open Source Committee under the Inspector General of Intelligence and Security, to serve as a focal point for the collection and processing of open source information.
- Consider restructuring the existing Australian Intelligence Community to include four distinct capabilities:
 - a national intelligence analysis capability,
 - a consolidated clandestine operations agency,
 - a national technical intelligence agency, and
 - a national research and development agency.

Externally

Australia already has a strategic advantage within the area of the South West Pacific based on:

- technical and communications capability;
- military, economic, linguistic and cultural links; and
- an intrinsic knowledge of the region.

This gives us an opportunity to become "The Regional Broker" in open source information. It is also consistent with calls for access into Asia and export orientated activities. Furthermore, this echoes the comments of the 1989 Ministerial Statement by Senator Gareth Evans, where he states the need for a "Comprehensive Engagement" with South-East Asia and "Constructive Commitment" in the South Pacific.

An Australian Strategy must consider the following aspects:

Factors effecting policy formulation

- Available Strategies and Existing Policies
- The Policy Development Process
- Other Countries Experiences
- Determining the Stakeholders and Their Interests
- The Technologies involved

Matters the policy should address

- Defining Open Source Information (OSI)
- Standards - Quality of Information
- Identifying Open and Closed Sources
- The Information Integration Process
- Legal and Ethical Issues
- Private Sector Opportunities
- Factors External to Australia

These aspects are presented as headings and further points are amplified. This is to serve an expanded checklist for further consideration in the policy development process in this working paper.

CHECKLIST

Available Strategies and Existing Policies

Three strategies are available to Australia:

- do nothing;
- parallel existing military alliances; or
- develop a new strategy which seeks leadership in the area of information brokerage.

There do not appear to be any existing policies that deal with open source information.

The Policy Development Process

What are the available models for policy development that best suit Australia ?
Who is involved with policy?

Other Countries Experiences

We need to be aware of the developments in other countries; Sweden, Israel, Japan, France, and the USA are already working on having a National OSI Community. This may lead to new alliances being formed; in the worst case, Australia may be "left-out-in-the-cold".

Determining the Stakeholders

Who is involved:

- The Role of International Government Organisations
- The Role of Australian Multi-National Corporations
- Non-Government organisations
- Foreign Governments

-Role of International Government Organisations (IGOs)

Papp (1984) suggests that IGOs may be considered as the referees or overseers for legal aspects at a global level. However, he also states that in cases of "deadlock" IGO- sanctions fail because individual countries place their own interests over those of international-law. Perhaps the UN or ASEAN may become the legal watchdogs on information management at a global and regional level respectively ?

-Role of Multi-National Corporations

What determines an multi-national corporation? If the major shareholder of an "Australian" company, from overseas, holds ownership of 51% of the shares, what guarantee is there that the interests of this stakeholder will be with Australia?

What will the role be of: Australian Telecom, Optus, Sky- Channel etc. This also involves other areas of the media, and in-fact could be seen to involve any organisation involved with telecommunications.

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- Role of Foreign Governments

- Are they friendly or hostile?
- Are they partially open?
- Do they have a desire and the ability to control output?

The Technologies involved

- Telecommunications
- Computing / Data Processing
- Information Technology

We need to examine the basic processes involved with information (viz. input, process and output.) and expand on data collection, manipulation and transmission.

Defining Open Source Information (OSI)

We will need to identify what is OSI, and this may best be decided by identifying closed source information and calling the remaining material open source.

Standards - Quality of Information

We must have the capability to be able to obtain a quality product. In most cases this may mean that we must deal with quantity; but have the capacity to refine it so that it becomes quality information.

To some extent we will have some control by our own standards and the supplier country's standards.

We must still be able to use intelligence techniques, to focus on a particular target or determine needs in advance and to sort quality from quantity.

Identifying Open and Closed Sources

Use existing intelligence processes to determine and validate open and closed sources.

The Information Integration Process

Consider existing methodologies from the corporate sector and compare them with military and other government models, to see if there is a more effective integration process which suits these proposals to OSI.

Legal and ethical issues

The following areas should be considered:

- human rights
- unenforceable laws
- psyops / propaganda
- suspicion of having a government controlled organisation
- political considerations, and
- ethics related to balancing across cultural boundaries.

Private Sector Opportunities

- Planning, Organisation, Staffing
- Direction, Control, Timings, Coordination, Budget
- Inputs, processes, products, outputs, outcomes
- Health & Safety

Factors External to Australia

Language, Cultural, Political, Legal and Educational differences.

Societal Normalities and Consumer trends will vary in other countries to our own.

Technology - telecommunications availability

Customers, Suppliers and Competitors

Cost of Equipment and Labour

Organisational Systemic Constraints

Existing Policy and Procedures

Production Marketing

Distribution, Research and Development

Finance and Personnel Availability

Finally, a most important point, do we have the ability to use the information which will become available to us, as a result of these global changes in OSI ?

SUMMARY

Advances in information technology, continue to make more OSI available than ever before. Countries that disregard these developments and "freeze the flow of data, will not, by definition, be able to make use of the (information) systems". This has led several countries to consider a policy on OSI.

This paper has proposed the addition of two more components to Papp's (1984) list of The Constituents of Power; Information and Technology. It also proposes that Australia should develop a national policy on OSI, which will make it the "Information Broker" for the South-West Pacific region, and further strengthen its position globally.

A list of factors effecting policy formulation, and matters the policy should address, are also presented for consideration.

No precedent has been set that is comparable to this topic. It seems that any policy development in the scope of OSI will be a disproportionate one; one that needs a giant step comparable with the enormity of the industrial revolution.

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