PROPOSALS FOR THE DEVELOPMENT OF AN OPEN SOURCE PROGRAMME TO SUPPORT NATO AND PfP ACTIVITIES

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NOTE: The proposals in this paper do not represent the official position of HMG

Introduction:

1.   The dramatic changes in the strategic environment have had profound effects on the way in which NATO conducts its business. Indeed, the changes have altered the very nature of the business in which the Alliance is involved. The most obvious of these is the incorporation of the first three new members of the Alliance for 16 years and the development of the Partnership for Peace initiative.   The shift away from the military focus of the Alliance in the days of the Cold War towards a more politically astute and centred organisation was started by Secretary Baker in 1989 when he called upon the Alliance to look towards helping set the new agendas for Europe in the 1990s.   At the same time, there have been a proliferation of requirements for intelligence support that are inherently non-traditional; including the readjustment of borders, the study of new migrations, concerns over environmental threats and the need to collect and analyses at the social and economic levels.

2.   Change is never an easy bedfellow and sixteen sovereign nations often have widely differing national interests. Despite the requirement to achieve consensus and the painfully slow process at times, NATO has made major strides in restructuring and reorganising itself in preparation for the welcoming of new members. There is, however, a clear need to develop a common view of the joint or coalition operating environment if co-operative efforts are to succeed.

3.   One of the most sensitive areas of any military alliance is that of the collection, analysis and dissemination of intelligence. NATO's intelligence structure relies primarily upon intelligence inputs from member nations with only a limited capability, especially in peace-time, for the generation of its own raw data. As such, the NATO intelligence baseline and its standard operating procedures are all centred on a highly classified basis and often exclude unclassified, open sources of intelligence, including commercial imagery.

Aim:

4.   This paper seeks to examine how the provision of intelligence, particularly at the strategic level, might be enhanced by the development of an Alliance-wide open source programme and what steps should be take for its establishment.

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The Information Revolution:

5.   The concept of an *"information revolution"* has been well developed over the past decade. It is a result of this revolution is that it has allowed us to gain access to unparalleled quantities of data and to retrieve, manipulate, sort, filter, interrogate, digest, plagiarise, and generally bend it to our bidding. Reality is somewhat removed from this in that much of the available information remains in a format that is not susceptible to digital manipulation, and the search engines are often only as good as the operators who manage them.   However, modern technology clearly gives us a tremendously powerful tool with which to conduct information analysis.   The revolution has been spurred by the simultaneous collapse of the bi-polar world and the freeing of much data, formerly held as classified.

6.   The revolution, so far, is, essentially, a technical revolution with the development of cheap yet fast computer systems capable of achieving the storage capacities and speeds necessary to search through vast quantities of data. There is, however, a necessary corollary, and that is the development of the human skills necessary to the effective use of the information tools. This is more than the ability to *"surf the net"* and to access on-line databases. It requires an understanding of the subject matter, the techniques relating to computer searches, an understanding of where information is likely to be and how to obtain it even if it is not digitally stored in an appropriate database. Perhaps most importantly, the revolution requires dramatic changes in culture, security, and procurement precepts such that the role of the intelligence analyst changes.   As the former Deputy Director of Central Intelligence Agency noted at a recent international conference on open source intelligence, the analyst must now *"know who knows"* and be able to identify, task and interact with subject matter experts outside the intelligence community, most of whom do not hold traditional clearances.

Intelligence Skills:

7.   Many of the skills required of the *information mining engineer* are those already inculcated in the intelligence analyst. The ability to comprehend the overall problem, whether at the tactical or strategic level, is an essential prerequisite for designing an appropriate search policy. The analytical skills allow him to filter the irrelevant, identify the valid and discard the inaccurate. It is important that analysis skills are not considered to be synonymous with searcher or librarian skills, however; the *information miner* must be able to understand where the unclassified information fits into the broad picture. This will demand access to all source data, including where necessary to classified sources. It is this breadth of vision which must be developed if the analyst is not to be myopic in outlook.

Sources of intelligence:

8.   Traditionally, intelligence services have concentrated on classified sources for their analysis. It is true that they have always relied on identifying unclassified sources to provide verisimilitude to the classified product, but the emphasis has remained on the provision of a classified report, issued to those suitably cleared to

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receive it. In the past, information has been classified either to protect its source or its subject matter. As we approach the millennium, traditional intelligence principles are being turned upside down. As noted by Hugh Smith and cited by Sir David Ramsbotham, *"Intelligence (for coalition and UN operations) will have to be based on information that is collected by overt means, that is, by methods that do not threaten the target state or group and do not compromise the integrity or impartiality of the UN (or NATO)"*.

9.   The development of modern information systems has made much of the material, formerly only available from classified sources, readily accessible to any who wish to seek for it.   Overhead imagery, for example, is now being supplied from commercial sources for a number of non-military tasks including land use, planning, exploration, etc. The resolution of these systems is already good enough for a number of military applications.

Open Source information:

10.   As we have seen, not all the available open source information is conveniently available on interconnected computer systems. Much remains in archives, libraries and other repositories; some is available only on request from government sources and some is in private collections. Availability of information, or at least the ability to access it, is not always international and can only be obtained by someone located in the vicinity of the data. According to US studies, some 80% of what a commander requires, is neither digital in format, in English or, often, unpublished. It will be up to the subject matter expert to bring these inchoate sources into a coherent product.

11.   Open source data is increasingly important to support the intelligence function. The increasing ability to successfully mine data from a large, incoherent series of sources, allows analysts to build up detailed composite pictures of their area of interest. Open source analysis is not a substitute for the traditional classified work, the analyst can use the open source view to be able to ascertain what addition information might be required on a particular subject and, having identified the gaps in his knowledge, task the increasingly scarce resources to target those gaps with whatever tools may be appropriate.   Essentially, open sources provide for the foundation for classified collection management, while also providing the context and, importantly from the intelligence perspective, sometimes providing cover for classified sources and methods and often giving evidence as to where new classified studies might be best targeted.

NATO/PfP Requirements:

12.   NATO and the Partners for Peace need to be able to build up a degree of mutual trust and compatibility if the PfP process is to succeed, particularly in the case of Russia. There are few areas as sensitive as the intelligence arena and co-operation in such areas would provide a strong confidence building measure and enhance stability. The new high-level councils, including the recently formed Permanent Joint Council (PJC), will require supporting by a suitable formed intelligence group. Although, as in the past, national intelligence capability can provide an input to individual delegations, the Alliance itself will require independent advice. This can

be provided by the existing NATO intelligence staff but would be considerably enhanced if there were to be a NATO/PfP open source facility, working jointly with the existing NATO staffs.

Open Source Programme:

13.   Within the NATO/PfP Open Source Programme, there would be a separate and distinct NATO/PfP Open Source Bureau of modest proportions, specifically tasked with the acquisition and analysis of information in support of the NATO/PfP secretariats, made up of personnel seconded from all participating nations. There are three potential options:

- establish a "virtual" bureau based on national intelligence staffs operating from their respective national capitals. This is a " Federated Bureau".
- establish a single NATO/PfP bureau at one location fully staffed by a representative group of all member nations. This is a "Central Bureau".
- Composite bureau of nationally based staff with a co-ordination group centrally located. This is a "NATO Web".

14.   The role of the programme, however formed, would be to provide, both on demand and as a routine service, high quality and reliable access to unclassified material. Within the current NATO nations, unclassified material has always been relatively easy to procure. A distinct advantage to NATO will be to have access to those databases and archive which, hitherto, have not been readily available from the PfP nations. The programme would make effective use of existing commercial service providers as well as those of individual member nations. Although the programme will demand highly trained personnel, there is no necessity for the programme to come under the direct control of the intelligence staffs. The intelligence staffs will, undoubtedly, be customers for the product but they will only be one of several potential customers. The bureau will be equipped to handle a wide range of queries, many of which will be easily answered with reference to on-line sources for NATO and PfP staff officers, military headquarters and component commands. Access would be via telephone, fax, and e-mail with clear performance targets to be met. The depth of expertise required will increase depending upon the level of service being provided:

- Periodic awareness service - single page digests on demand
- Search and retrieval - including use of commercial databases
- Primary in-depth research with the identification of appropriate subject matter expertise to meet the customer's requirement
- Strategic forecasting, including that for scientific and technical trends.

15.   The importance of commercial imagery as a foundation for a common operational appreciation cannot be understated. For a relatively modest outlay, commercial imagery could be acquired which would have considerable utility both within NATO and in member nations. The imagery currently available can readily create the 1:50 combat charts which do not exist for much of the region today, as well

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as providing for the provision of precision munitions targeting information and for three-dimensional, interactive, flight mission rehearsals.

16.   The function of the programme would be to provide what one commentator has described as *"just enough, just in time"* intelligence, clearly focused upon the customer's requirements.   It would be designed from the outset to add value to information available to Alliance and national decision makers. In some cases, where the query is complex or the customer is a high priority one, there may be a requirement to provide what would, in commercial terms be an account manager whose task would be to act as an interlocutor between the customer and the programme information staffs. His role would be to assist the customer in focusing his requirements and in the management of the subsequent search and retrieval.

Implementation:

17.   The cost of implementing such a programme is considered to be modest. Much of the required interconnectivity is already in place between the respective capitals and the NATO HQ. The three options would provide for a range of staff costs depending upon whether the programme was set up as a single site entity or as an interconnected, federated system of cells. The advantage of the former is that the members of the programme are clearly linked as a team but the federated solution may allow for better insinuation of the individual open source programme cells with their respective parenting organisation within each nation. This could be augmented by the provision of a co-ordination staff at a convenient site and the use of exchange personnel between the national cells.

18.   There would be a requirement to train the programme staff to a common standard to ensure that all participating nations could contribute fully to the activities of the organisation. Training needs analysis would nee to be done to support not only the initial training requirements but also the longer-term needs of the programme. The DISS at Chicksands in the UK is one of several places where such training could be given.

19.   The provision of such a bureau need not necessarily be a NATO/PfP owned facility: out sourcing of the organisation would save start-up costs and transfer risk to the private sector. The programme would then charge NATO and PfP nations for their services with clear performance criteria laid down for the delivery of the product. This would have the additional advantage of further distancing national intelligence staffs from the provision of the service and, inter alia, allow them to concentrate on their primary functions. It would be important that any selected company would be required to select staff from all participating nations, especially those of the PfP, to ensure the continued national commitment to the overall programme. As an interim alternative, a small contract could be let for the provision of specific open source intelligence products to the NATO/PfP programme. The core value of this programme, however, is the creation of a shared NATO/PfP open source intelligence architecture with interoperable hardware and software. To achieve this ultimate goal, however, will require this programme to be fully integrated into the C4 planning and resource management aspects of NATO and be fully supported by all members of the Alliance.

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20.   The key posts in this organisation would be at the senior management level; the director of the programme would have to be chosen for his vision, intellect and management capabilities rather than for the "cut of his cloth". It would be essential that these key personnel had the full support of the NATO/PfP Board.   Initially, no more than six full time civilian members are envisioned, with additional staff provided from member nations' military personnel

Conclusions:

21.   This report concludes that:

- Open Source programme for NATO is viable option for NATO/PfP
- Open Source programme would provide a significant confidence building measure for PfP nations
- An open source programme will allow PfP and candidate nations to participate at an early stage in the intelligence process within the Alliance
- An open source facility is complementary to existing intelligence functions and will allow the traditional NATO intelligence community to concentrate on other core skills.
- The ability to acquire and exploit commercial imagery and external subject matter expertise will assist in the development of a clearer understanding of the joint NATO/PfP operational environment.
- Open source analysis uses traditional intelligence analytical skills, although some additional talents are required to ensure effective and rapid retrieval of data.
- There would need to be an assessment of the validity of the product.
- Training of personnel for such a programme can be easily developed and conducted at a number of places of excellence throughout the Alliance.
- The programme would provide 24 hour access to NATO and national staffs with specific "customer" targets established in relation to the delivery of the required analysis.
- The entire operation could be undertaken by a commercial provider but the involvement of staff from all member nations would be an important consideration.

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