**16th International Command and Control Research and Technology Symposium
(16th ICCRTS)**

16th ICCRTS Theme:
Collective C2 in Multinational Civil-Military Operations

Title of Paper:
Applying Influence Diagrams to Support
Collective C2 in Multinational Civil-Military Operations

Topics:

Primary: C2, Management, and Governance in Civil-Military Operations (#10)
Alternates: Collaboration, Shared Awareness, and Decision Making (#5)
              Approaches and Organizations (#2)

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Classification:
Unclassified

Applying Influence Diagrams to Support Collective C2 in Multinational Civil-Military Operations

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Abstract. *Modern conflicts feature civil-military operations conducted by multinational coalitions involving military forces, international agencies and other organisations. Influence diagrams are a visualization tool that can be employed to support the collective C2 by facilitating a clear communication of commanders' intent and organising a concerted effort for its implementation. They can enable a common operating picture and distribution of roles and responsibilities among the participants in the broad spectrum of combat and non-combat operations. The influence diagrams can help align the intents and identify the appropriate and acceptable contributions of these participants in view of their individual capabilities and the perceptions of the host nation's population. An example of an influence diagram is offered based on Adaptive Campaigning, the current approach of the Australian Army for conducting both military and civil-military operations.*

1. Introduction

Warfare has always been fought using a variety of conventional and non-conventional means. In recent times the emphasis of Australian and other Western military commanders and planners has shifted to focus beyond combat alone. This is the result of recent insurgency and asymmetric warfare in which coalition forces have suffered casualties and have been prevented from achieving their objectives by adversaries in possession of "low-tech" capabilities. It is already an accepted fact that the use of traditional warfare tactics is not adequate when fighting in this complex environment. As the NATO commander General John Craddock stated, "Western efforts in Afghanistan were disjointed and the battle could not be won by military means alone" (Wyatt 2008). It has become apparent that the Land Force needs to perform functions beyond the range of what were considered typical military tasks. For example, more and more often, the military have been providing humanitarian aid and disaster relief, and taken part in stabilisation and reconstruction efforts. Furthermore, the deployment of a task force is usually complemented by civil-military cooperation (CIMIC) involving other government agencies (OGAs), non-government organisations (NGOs) and local populations.

The resulting coalition formed between military and non-military organisations is diverse in nature. This goes beyond the interoperability issues normally considered within military coalitions (Clark and Moon 2001, Moon *et al.* 2008), as at least in military coalitions each member is coming from a similar background even if there exist some cultural differences. Within a CIMIC coalition many of the components have different ways of operating as well as different expectations of the other members. Thus, getting a coherent effort from all members of this CIMIC coalition can be difficult and time consuming. There is an apparent need for improved operational concepts and tactics enabling a successful coalition intervention.

This paper focuses on the use of influence diagrams (IDs) as a tool aiding the formation of CIMIC coalitions. In this paper it is argued that IDs can be used to ensure:
- A coherent operational approach;
- Development and communication of Commander's intent;
- Distribution of roles; and
- Interactions between actors

Thus, IDs can help ensure everyone knows who is doing what and how all the parts form the whole. This means that everyone knows the role of the other players as well as with whom they need to interact. This then allows for better adaptation and self synchronisation among partners.

The paper begins by giving a brief overview of the Australian Army's Adaptive Campaigning (AC) concept and introduces the essential tasks and activities ID and actors ID based on this concept. It then uses these IDs to show the utility of IDs in support of collective C2 in multinational CIMIC operations. The key areas of discussion are those highlighted by the *ABCA Coalition Operations Handbook* (COH), CIMIC based concepts from Australia, the UK and the Netherlands, complex warfighting doctrine from the USA, UK and Canada and recent lessons learnt from the Netherlands[1]. Finally the paper discusses in more general terms the benefits of this type of approach to the conduct of CIMIC operations.

2. Adaptive Campaigning Influence Diagrams

AC is the concept adopted by the Australian Army in response to the challenges of future warfare (Australian Army 2009). It describes how an Australian Land Force will approach the accomplishment of its objectives effectively and efficiently. It discusses the need for the Land Force to perform successfully over five different lines of operation (LOOs) (not just focus solely on combat) and remain adaptive in the context of continuously evolving complexity and operational uncertainty. More details on AC are provided in Appendix A.

IDs are a visualisation tool used to assist the human mind to better understand relationships, connections and effects of large complex systems (Coyle 1996 and 2004, Curtis *et al.* 2006). The technique is used to identify influences one action or event has over other actions and events. The use of IDs to represent this type of problem is not new and includes references such as Coyle 1985, Coyle and Miller 1996, Coyle 1999, Tailby *et. al.* 2003, Alcantara Gil *et al.* 2005, Baker 2006, Grynkewich *et al.* 2006, Choucri *et al.* 2006, Hetherington 2006, Choucri *et al.* 2007, Pierson 2007, Diaz 2008, Morrison *et al.* 2008, Crane 2009, Maldonado 2009 and Schoenwald *et al.* 2009.

The ID in Figure 1 was developed based on AC and its sub-concepts (Australian Army 2009) along with essential tasks and activities needed to achieve the objectives. This is a model of the AC concept but is not the only possible model. All major influences within and across LOOs are included in the diagram. Following Figure 1, the activities from the various lines of operation have been coloured accordingly: green for Joint Land Combat, blue for Population Protection, purple for Information

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[1] A summary of these documents can be found in Appendices A to C.

Actions, yellow for Population Support, and red for Indigenous Capacity Building. For more details on how the diagram was developed, refer to Bilusich *et al.* (2010a,b)[2].
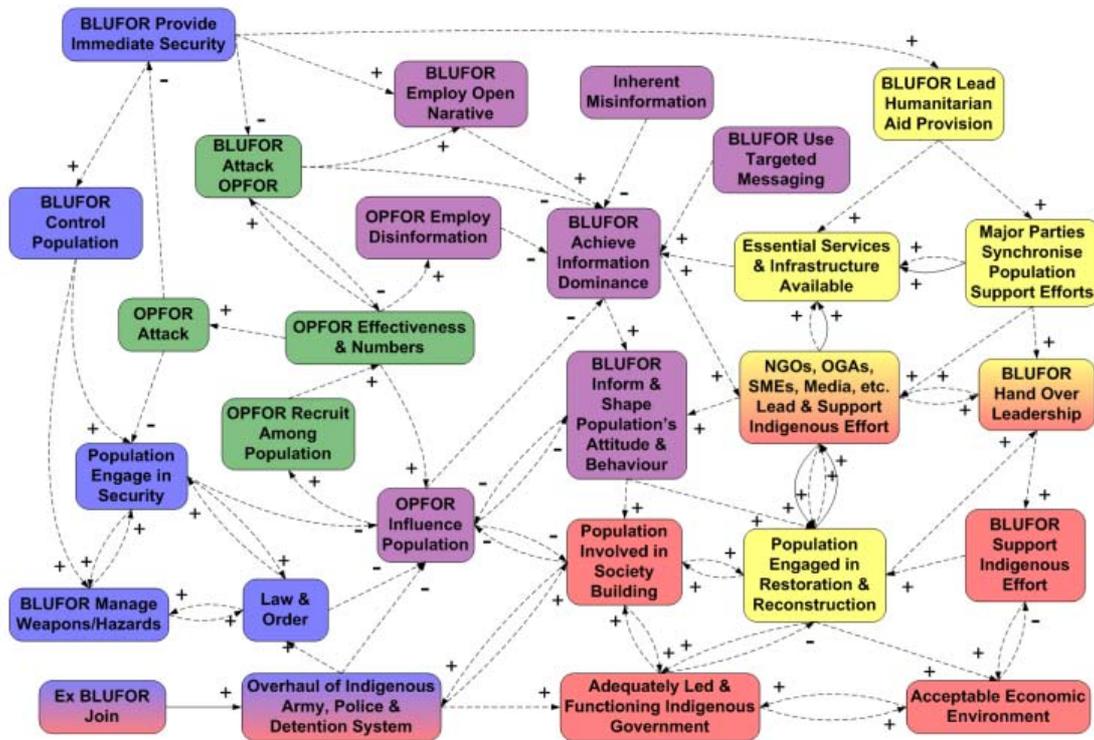

Figure 1: An Adaptive Campaigning Influence Diagram.

In this paper the ID terminology described by Coyle (1996, 2004) is adopted. Where one action or event has an influence over another action or event, it is displayed with an arrow going from the influencing action/event to the influenced action/event. A dashed arrow indicates a causal relationship while a solid arrow represents the physical movement of people and resources from one group to another. An arrow labelled with a positive sign indicates a positive relationship (more leads to more, less leads to less). While an arrow with a negative sign shows a negative relationship (more leads to less, less leads to more). An example from Figure 1 is where 'BLUFOR provide immediate security' has a positive causal influence on the ability of 'BLUFOR to control the population'[3]. This means that the more security BLUFOR provides to the local population, the more BLUFOR will be able to control the population. An example of a negative influence is between 'law and order' and 'OPFOR influence population'[4]. This implies that the more law and order is established, the less likely people will be influenced by OPFOR. An example of a movement of people in Figure 1 is the positive full arrow between 'Ex BLUFOR join'

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[2] Also, Bilusich *et al.* (2010a) describes how this ID can help improve the understanding of AC as a concept, while Bilusich *et al.* (2010b) how it can assist in the implementation of AC. Additionally, Bilusich *et al.* (2011) focuses on the utilisation of these diagrams to inform further iterations in concept development.

[3] In this paper BLUFOR stands for Blue Force and represents a Joint Task Force of Coalition forces.

[4] In this paper OPFOR stands for Opposing Force and represents regular enemy units, insurgents and criminals.

and 'overhaul of indigenous army, police and detention system'. This represents actions such as former BLUFOR members that after a deployment leave the defence force and become employed by private security organisations hired to train local security organisations.

One of the reasons why IDs are highly suited for examining complex situations is the formation of influence feedback loops. These loops form when a sequence (pathway) of influence flows from one point, through other actions and events, and then flows back onto the original point. Because the nature of each influence is assigned as either positive or negative, each influence loop will also have a sign to identify its character. Positive loops are reinforcing or growth-producing loops while negative loops are balancing or goal-seeking (Coyle, 1996 and 2004).

To support the collective C2 and in particular the interactions between coalition partners, a different ID can also be considered. Figure 2 is a simple high level ID which shows the actors that will play an influential role within a military operation or campaign. This actors ID may be utilised to provide information on the dynamics of the relationship between actors thus complementing the colouring in AC ID.
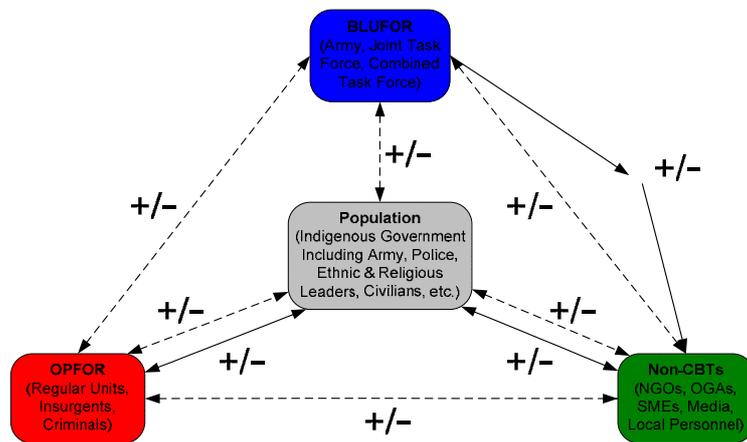

Figure 2: Actors influence diagram.

The ID in Figure 2 identifies the influences and movement of people between the various groups in an operation. This ID can be further expanded by representing different coalition partners, humanitarian and government organisations as individual nodes. It can be used to identify the specific interactions (or lack of) between each of these specific groups.

3. Utilisation of AC ID in Multinational CIMIC

The key areas of concern raised in the multinational CIMIC concepts, doctrine and lessons summarised in Appendices A to C are:

• **A coherent operational approach**. A key aspect of C2 in multinational CMIC operations is the need to ensure all actors understand the approach being taken by others. Each of these actors comes with their own perception of how things can be done best to achieve the desired outcome of the operation. To ensure a

coordinated effort across these diverse views and approaches there is a need to establish a coherent approach to the operation.

- **Communication of Commander's intent**. One of the key areas of concern expressed at the concept and doctrine level as well as coming out of the lessons learnt is the requirement to coordinate different actors within a CIMC coalition. It is clearly established within military doctrine that this issues rests with the clear definition and communication of Commander's intent. A part of this is the need to establish measures that determine the impact of the operation.
- **The distribution of roles**. There is a need for all actors to have a common understand their and others role in the operation. Articulation of actors roles helps begin the building of trust between the actors.
- **Establishment of the interactions between actors**. A key aspect of any CIMIC operation is the establishment of C2 between actors and how this will change as the operation evolves.

The AC IDs presented in Section 2 will be used to show how IDs can be used to help overcome these key areas of concern.

3.1. Coherent Operational Approach

The AC ID is a diagrammatic representation of the AC concepts. Presenting the components and influences in diagrammatic form allows easier communication of the concept to others. This is especially important with novel concepts and when specific terminology is used which may not be familiar to others at first glance. The AC ID model can help communicate these new concepts and terminologies easier. This is particularly true when operating in a coalition where coalition members are not familiar with each others concepts and doctrine.

Just as the AC ID represents the Australian operating concept, it is of value to also develop IDs for the other coalition partners' operating concepts. This allows for better communication because each coalition member is likely to use their own specific terminology where in fact on many occasions it is quite likely that they are describing the same or very similar functions or activities.

Once this has been conducted it is then possible to start to fuse individual IDs to form a single joint coalition ID. Doing so will enable each member of the coalition to see where their concepts are identical to their coalition partners' and reveal where there is no overlap and hence a difference in philosophy or objectives for each partner. Although there may be differences, this is not an issue. By simply identifying the differences it allows each partner to not only be aware that there are differences but also to understand why a coalition partner may be doing some actions when they do not match with the operational objectives of another's concept. Developing a coherent operational approach helps reduce confusion which may appear due to the differences in concepts and mission objectives.

The fusion of individual IDs is not constrained to military partners only, the host government and NGO IDs can also be incorporated to form a global ID for a specific operation. This will help improve the collective C2 for each of the actors. This approach forces planners to consider all aspects of the problem at the necessary level of detail. It also allows all aspects to be examined with the appropriate level of granularity within a single representation.

Finally, even if all actors don't present their approach in the form of an ID. A single country's approach presented in this form can help facilitate coordination between all actors.

3.2. Developing and Communicating Commander's Intent

In addition to IDs providing a common concept of operation, they can also be used to communicate commanders' intents. Whether a coalition ID is developed or a single nation's approach is utilised (such as AC ID which uses BLUFOR to represent the coalition force), as a minimum, the diagram allows each of the partners to understand the concept by which operations will be conducted. It also provides an opportunity to ensure everyone is aware of the language used and the influences actions will have on other activities.

The next application of the ID is to assist during planning and conduct of operations. By highlighting pathways of influence, it is possible to set a course (or courses) of action which will be taken in order to achieve the desired objectives. This can then be communicated through the diagram to illustrate (internally and also to other coalition partners) why specific actions will be taken and how it is intended that they will enable the objectives to be met. As there are many influences, actions can have, especially in a complex environment, the intent for conducting certain actions may not be clear. The ID may help reduce some of this confusion.

Reinforcing and balancing loops can also be highlighted. Actions can be taken to ensure key reinforcing loops are active. Although some of these actions may be quite removed from the general activities of the operation, by highlighting these loops on the ID and showing how they feed into the main courses of action may once again reduce some of the confusion of why certain actions are taken. These applications of the ID ensure a collective understating of why actions are taken.

These courses of action and active loops can be shown to members of humanitarian organisations and local government representatives in order for them to see and understand the actions being taken. This also shows how their actions fit within the broader plan.

It is often very difficult to measure the performance of CIMIC coalition operations in complex operating environments. Because IDs show the influences actions and events have over other actions and events, these can be used as the components which are probed in order to measure how well a mission is going. Also, since influences form pathways of influence, extracting measures from these actions can allow for changes to be planned for, in future efforts. In addition, it is also a way to help determine where and when to shift focus and effort to other actors such as other coalition partners, aid agencies or the local government.

3.3. Distribution of Roles

Many CIMIC operations cannot be conducted by a single nation's military force. They require joint coalition partnerships and include the services of NGOs and OGAs. When involved in operations with a coalition partnership, the distribution of activities can either be by region, where each partner does all the required activities

in separate areas of operation, or where the partners work together over the entire area of operation but on specific tasks. The second option is often preferred as each of the partners can provide services where they have the expertise and capabilities. Some activities may be conducted by both or several members of the multinational force (such as intelligence gathering by talking with locals) but others may be conducted by one of the coalition partners on behalf of both (for example, provide aerial attack support, or training the local government's security forces). With the presence of aid agencies in some areas of operation, it may not be necessary for the military to double-up and provide the same services in the same region if the aid agencies are already providing sufficient support in these functions (such as providing potable water or dental services). It would be a much better utilisation of effort if the military provided alternative essential services which aid agencies are not providing.

The ID can be used as a common framework to assist in assigning specific roles and ensuring all the aspects of the concept are covered. It can also help identify potential friction points before they occur.

After roles are distributed, the ability to constantly refer back to the ID and examine the influence arrows, allows each partner to examine how their actions may affect others, and how others' actions may affect that one's ability to conduct their own actions.

3.4. Interaction between Actors

With a distribution of roles between military coalition partners and civil actors during an operation, it is important to know exactly who is taking the leading role in the various areas that need to be addressed and who has the overall lead. Figure 3 demonstrates one way in which various major roles can be highlighted on an ID and how during the progress of an operation, the roles may change. In this example, the roles of the military coalition actors are enclosed in the blue ring and those conducted by civil actors (including the local population, NGOs and OGAs) are enclosed by the green ring. The interface between the two rings shows where actions by one of the actors will have an influence on actions conducted by the other actors. These interfaces highlight where the two actors need to be in constant communication in order to ensure that each is aware of the other's actions and performance measures as they will impact on actions they themselves need to take.

In large complex operations it may be hard to track exactly who is conducting which activities and there is a chance that some actions will be doubled up. Representing these roles on the ID reveals where these overlaps are and what changes should be made to ensure the most efficient use of resources is guaranteed. On the other hand, some activities may be of high importance and require input from many partners. These regions will be evident by the overlap in contributors to these functions. Employing the IDs for this purpose will advise where communication between partners needs to remain high which in turn will assist in maintaining a collective C2 in key areas.
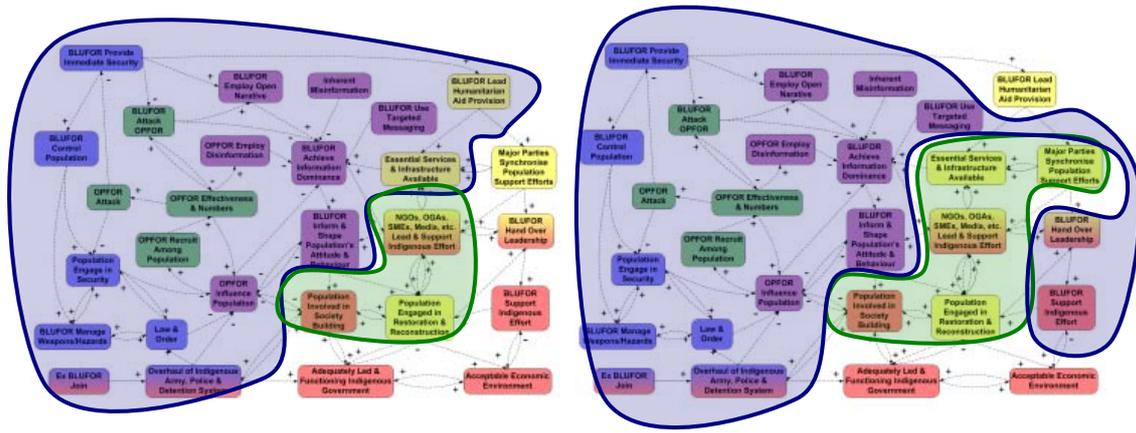
Figure 3: AC ID showing the potential role distribution.

The identification of roles does not need to remain at the level of 'military coalition' and 'civil' (as shown in Figure 3). It can be broken down further to the level of individual coalition members, specific humanitarian organisations and the exact government organisations performing the various tasks. Individual IDs can be developed to show the interfaces and overlaps in activities between any two actors of interest, but in particular the interaction of a military partner with others. This could be a valid tool to assist in determining the level of interaction required with each organisation. In Rietjents and Bollen (2008) these levels are described as reliance, assistance, autonomous and adversarial (Appendix C provides more details on these levels).

To facilitate the development of collective C2, the actors ID (shown in Figure 2) can be utilised. This ID can be continually examined during a campaign to ensure communications are maintained with the required organisations to ensure most effective delivery of services. Also, during the progression of a campaign it is likely that the interactions between partners will change. Either this can be anticipated and planned for, or the changes can simply be recorded for future planning purposes. Figure 4 shows the expected changes in dominant group interactions as a campaign progresses. In this set of IDs the strongest influence are shown in bold.
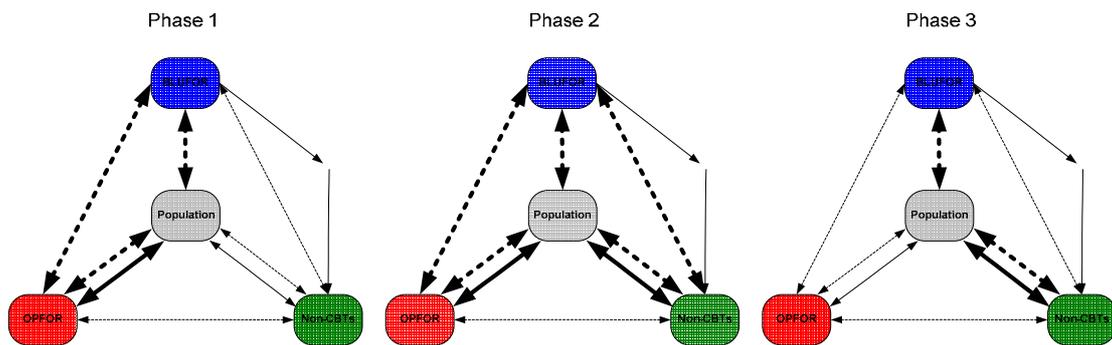

Figure 4: Actors influence diagram over three phases of a campaign.

Once again as described earlier, these time lapse IDs can be developed for every pair of specific coalition members and partners to identify exactly what level of interaction is required and how that interaction will change over time. Comparing the expected time lapse IDs with post-operation analysis of the actual interactions which took place could be used to assist in identifying lessons learnt. It could also

show interactions between which organisations were most successful and which organisations you may trust to interact with in future campaigns.

4. Benefits from using AC ID

The IDs described in this paper are by no means comprehensive. They are the first iteration and will inevitably change as feedback is received. They serve two purposes. First, they highlight the applicability of using IDs to gain insights. Second, they help to identify some areas of improvement of collective C2 in multinational CIMIC operations. These diagrams are not a solution to the problems, but rather a means or a tool to assist in better understanding the situation and making more informed decisions. Briefly, the benefits of utilising them are:

- ensuring the contributions of CIMIC coalition members are compatible, complimentary, suitable;
- ensuring appropriateness of assigning roles to actors based on capability, rules of engagement;
- facilitating better integration of effort,
- enabling synchronisation and orchestration across the coalition;
- provision of a visualisation to define and communicate commander's intent;
- common understanding of actors roles and their changes with the evolving situation;
- understanding of the required interfaces between actors and how they will evolve over the campaign

Finally, this list does not represent all the benefits from the utilisation of the ID approach; rather these are the benefits currently seen as being most applicable to collective C2 in multinational CIMIC operations.

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Appendix A: Comprehensive Operational Concepts

A.1 Adaptive Campaigning

AC outlines the Land Force's response to the conflict environment as part of the military contribution to a whole-of-government (WoG) approach to resolving conflicts, for details see the Australian Army's publication (2009). It describes the reasons for the Army to adopt an adaptive approach to future military operations dependent on continuously evolving complexity and operational uncertainty, for more details see Grisogono and Ryan (2007). The purpose of AC as a warfighting concept is to set out how best the Land Force can influence and shape perceptions, allegiances and actions of a target population to allow peaceful political discourse and a return to normality. Given the complexities of the environment the key to the Land Force's success is expected to be its ability to effectively orchestrate effort across the five LOOs: Joint Land Combat, Population Protection, Information Actions, Population Support and Indigenous Capacity Building. Australian Army (2009) defines them as follows.

- **Joint Land Combat** – actions to secure the environment and remove organised resistance, and set conditions for the other LOOs.
- **Population Protection** – actions to provide protection and security to threatened populations in order to set the conditions for the re-establishment of law and order.
- **Information Actions** – actions that inform and shape the perceptions, attitudes, behaviour and understanding of target population groups.
- **Population Support** – actions to establish/restore or temporarily replace the necessary essential services in affected communities.
- **Indigenous Capacity Building** – actions to nurture the establishment of civilian governance, which may include local and central government, security, police, legal, financial and administrative systems.

AC emphasises the interdependence of the LOOs and their ability to reinforce each other. Hence, the ability of the Land Force to effectively orchestrate effort across all five lines is considered as a key to successfully achieving its mission. Moreover, operational uncertainty early in a campaign may most likely require the Land Force to take also the leading role in non-warfighting activities.

A.2. UK's Comprehensive Approach

The Joint Discussion Note (JDN) 4/05 *The Comprehensive Approach* (CA) of the UK Ministry of Defence (MOD, 2006) describes a conceptual framework for coordinating the objectives and activities of individual UK government departments in identifying, analysing, planning and implementing WoG responses to complex situations in a geopolitical context. Specifically, the CA is to provide guidance to the UK MOD on the principles underpinning the approach and its incorporation at the MOD level into the planning and execution of operations at home and abroad. Although the CA is considered an extension of the already existing publications '*UK Military Effects-Based Approach*' and '*The Military Contribution to Peace Support Operations*', it may only be viewed as providing doctrinal basis for further development and experimentation.

The CA spells out the need for collaborative processes, shared understanding and concerted effort throughout the whole range of conflicts and crises. It also points out the need for this type of approach for conflict prevention. In this specific case, the synchronisation of prevention, intervention, regeneration and sustainment activities is necessary to ensure successful problems resolution leading to self-sustaining stability and ultimately peace. The CA conceptual framework is underpinned by four guiding principles: a proactive cross-Whitehall approach; shared understanding; outcome-based thinking; and collaborative working. Furthermore, military assets are seen to conduct successful operations and produce enduring outcomes when involving a broad spectrum of co-contributors and under a variety of influence factors. It lists specific advantages to the military if a CA is applied (MOD, 2006, pp. 12-13), such as: a more comprehensive analysis of the situation; wider participation and coordination between departments and agencies; more intelligence and analytical assets; better planning and use of limited, including military, resources; greater appreciation of the contribution by non-military assets; and military personnel are exposed to a wider range of "best practices" and positive influences.

Appendix B: Overview of CIMIC Approaches

This appendix provides an overview of existing approaches to complex warfighting. In particular it focuses on Western military approaches with a particular emphasis on CIMIC aspects of this problem. It begins by discussing the *ABCA Coalition Operations Handbook* (ABCA 2010) and goes on to give an overview of doctrine and experiences in developing CIMIC approaches of several individual countries.

B.1. ABCA Coalition Operations Handbook

The COH[5], focuses on improving the efficiency and effectiveness of a coalition by optimising the interoperability among its members. This is not a mere task, since the purpose, composition and capability profile of a coalition depend on the dynamic nature of the campaign and the contribution of each coalition partner. Moreover, the COH points out that there should be a clear delineation between areas within coalition control and areas better left within the control of the host nation.

The COH says that coalitions are created by nations to promote mutual interests or security against various threats. They are also formed because one country is rarely in the position or prefers not to operate unilaterally due to political or military considerations. It also outlines that coalition operations are based on a comprehensive approach involving OGAs, NGOs, international and regional organisations.

When entering into a coalition agreement, all national military commanders need to have a clear understanding of the intents of the designated coalition commander and their counterparts. This is a necessary condition for setting the foundations of a successful collaboration and cooperation in a collective C2 environment. It underpins the achievement of unity of effort starting with the coalition formation, creating a common situational awareness and synchronisation of actions. The commanders also need to establish a good understanding of the interests, capabilities, limitations, preferences and potential contributions of each coalition member.

Within the COH Chapter 12 is dedicated to CIMIC. The COH says that a broader view of CIMIC goes beyond the limitations of a specific mission and includes pursuing the achievement of the strategic end state, thus contributing to higher level objectives. CIMIC encompasses the interaction, cooperation and coordination between military forces and civilian population groups, organisations and agencies. It may include local authorities, ethnic and religious representatives, international

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[5] The following definitions come from the COH:
- A coalition is an ad hoc arrangement between two or more nations for common action.
- A coalition action is a multinational action outside the bounds of established alliances, usually for a single occasion, or for longer cooperation in a narrow sector of common interest.
- A coalition operation is an operation conducted by forces of two or more nations, which may not be allies, acting together for the accomplishment of a single mission. Coalition operations are a subset of multinational operations. These operations can also include various non-military organisations and other services.
- Multinational operations are military actions conducted by forces of two or more nations, typically organised within the structure of a coalition or alliance.
- CIMIC is coordination and cooperation in peace or war between the military and civil actors, including the population and local authorities.

aid workers. Conceptually, CIMIC helps the commander create working interfaces with the entire spectrum of civilian influences into the area of operations.

B.2. Overview of Complex Warfighting Doctrine

A very high level summary of existing complex warfighting doctrine, including counterinsurgency (COIN), is now provided. In this summary the following documents are reviewed:

- The Joint Discussion Note (JDN) 4/05 *The Comprehensive Approach*;
- The JDN 2/07 *Countering Irregular Activity within a Comprehensive Approach*;
- Joint Publication 3-24 *Counterinsurgency Operations*;
- Field Manual (FM) 3-24 *Counterinsurgency*;
- British Army Field Manual *Countering Insurgency*; and
- B-GL-323-004/FP-003 *Counter-insurgency Operations*.

UK's *Comprehensive Approach* is a conceptual framework at WoG level aiming at coordinating the participation of government departments and synchronisation of their efforts and providing guidance to the MOD on the principles fundamental to the approach and its application into operations. In the context of *Countering Irregular Activity*, which does not appear to cover entirely modern warfare, it emphasises the link between irregulars and non-state actors. The approach introduces the concept of "campaign authority" as the most appropriate means toward the desired end state and the military contribution to it.

The US *Counterinsurgency Operations* joint publication establishes the COIN doctrine providing guidance to the Armed Forces of the United States in joint operations and the basis for interagency coordination and US involvement in multinational (alliance or coalition) operations. It describes the relationship between COIN, counterterrorism, irregular warfare and foreign internal defence. A comprehensive (WoG) approach is needed for the success of the usually protracted COIN campaigns in which the primacy of the land component of the military instrument is acknowledged. COIN operations are to be synchronised along multiple and complementary LOOs in campaigns that pass through different phases exhibiting changes in focus and leadership.

The US *Counterinsurgency* field manual is a 'hands on' instruction how to act in case of insurgencies although it contains a significant theoretical part describing the concept of insurgency. Its scope is relatively narrow covering mainly insurgency although it addresses all other LOOs and the cooperation with non-military actors. The manual goes deep into the details of COINs operation and prescribes actions suitable for specific situations.

The *Countering Insurgency* army field manual describes the way the British Army plans and executes COIN operations at tactical level i. e. at the brigade level and below. A COIN campaign must be focused "on securing the local population and gaining and maintaining popular support". This must be achieved through the concerted effort of the host nation and its forces, British forces and allies, and other government partners since it is not just a military operation but "a battle of political wills with a number of lines of operation". Currently countering insurgency is based on a comprehensive approach (without mentioning JDN 4/05 or JDN 2/07)

summing the cross-government efforts aimed at delivering a political long-term solution that includes the primacy of intelligence, the use of influence operations and results in securing the consent and support of the people. The British Army Field Manual is coherent with the UK joint doctrine publications and the allied ones, in particular, USA, Canada and Australia.

The Canadian *Counter-insurgency Operations* doctrine publication provides guidance to commanders and staff involved in planning and conducting COIN as part of the continuum of operations for Canadian Forces. It distinguishes between three levels of consideration for force employment, namely strategic, operational and tactical and specifies the different tasks at each level. A harmonised and comprehensive approach is required for the success of a COIN campaign that involves the collaboration of the host nation and UN agencies and groups. Attention is also paid to the changing role of the land forces as the campaign progresses.

The above doctrinal publications reinforce the already well-established view of the importance of CIMIC and the recent shift to adopting a more concerted approach involving the broad spectrum of actors in a conflict. What has been the focus of books and articles is now firmly incorporated in current doctrine, for example: how to analyse the nature and root causes of insurgency; and how to describe and manage the military contribution within an orchestrated COIN effort. Recent lessons learnt, especially from Iraq and Afghanistan, have led to the development of explicit guidance how to find and achieve a lasting resolution of an insurgency. Australia and its allies appear to have converged toward a common approach to contemporary warfare, especially in the ever more prevalent case of insurgency – a comprehensive approach, a whole-of-government approach or Adaptive Campaigning.

B.3. Dutch approach to CIMIC

Managing Civil-Military Cooperation: A 24/7 Joint Effort for Stability (Rietjens and Bollen 2008)
Participants in CIMIC operations generally differ significantly from each other and may exhibit a broad spectrum of characteristics and approaches to the crisis at hand. They need to adapt their thinking and way of operation in order to fit as seamlessly as possible into the coalition effort as discovered by the Dutch through their first hand experiences in operations in places such as Afghanistan, Albania, Kosovo and Sri Lanka. In addition, lessons learnt extracted these experiences show that CIMIC campaigns cannot succeed without the active participation of the local populations. In this context, collective C2 has to be in place to ensure an orchestrated effort from all cooperative and coercive elements. The C2 interoperability between the coalitions partners have proved to be of vital importance in these operations. Interoperability has been manifested in a variety of ways. These include:
- Being engaged in parallel operational processes where civilians and military do not cross domains and stick to their own core business activities.
- Another one may include the occasional passing of information and other necessary but scarce resources between participants in a CIMIC operation.
- A third one is the ultimate situation of genuine cooperation on a daily basis in order to accomplish agreed mutual objectives.

The interoperability difficulties stem mostly from the temporary nature of the cooperation and the lack in general of an established governance framework and a

shared hierarchical structure and hence – consistent and common decision making and accountability processes for collective C2.

The Dutch CIMIC operational experience appears similar to the Australian approach. One of the main lessons learnt relates to the changing effectiveness of military forces, from making a difference initially in a disaster situation to being unable to adapt later to the needs of the local population. Thus, instead of breaking the stereotypical perception against external military forces providing humanitarian assistance, they provide ground for the enemy to promote the resistance of aid. Furthermore, some findings discuss how the lack of an overall strategy and the application of standards foreign to the host country might have led to unsuccessful missions.

Dutch 3D approach (van Beijnum and van de Goor 2006)
The Dutch '3D concept' (Defence, Diplomacy, Development) addresses the need for a broad, holistic approach when engaging in fragile states that usually feature a myriad of problems and challenges. A successful engaging should be based on a well prepared and synchronised effort across "the political, security, economic, humanitarian, development and administrative domain". Indeed, fragile states are considered a threat to regional stability and international order; they need assistance in the provision of basic services to their people, and they can be seen as emerging markets economically. However, these domains are interdependent and working effectively across them requires the utilization of a variety of government departments and agencies making the 3D approach a precursor to a WoG one.

The 3D approach features a policy on CIMIC, jointly prepared by the Ministers of Defence, Development Cooperation and Foreign Affairs. It is 'as civilian as possible, as military as necessary'. The policy covers the cooperation between military and civilians, including civilian authorities and NGOs – national and international, for 'winning the hearts and minds' of the local population. CIMIC also focuses on peacekeeping operations, later followed by 'sustainable reconstruction'. Peacekeepers may be involved in restoring infrastructure, short term governance and policing duties, which should be handed over to civilian authorities as soon as possible. Three interdependent dimensions are identified in the reconstruction process, namely:
- Establishing security and stability;
- Restoring governance and public services; and
- Providing for social and economic development.

The 3D approach recommends the integration of various policy instruments for realizing the sustainable reconstruction. Furthermore, the operationalising of such an approach should be supported by policy, organisational and financial structures. The main actors in this approach comprise the Ministries of Defence, Economic Affairs, and Foreign Affairs (including Development Cooperation) while Justice and Interior may play a contributing role. Financial, institutional and personnel instruments facilitate this inter-ministerial cooperation, such as funds, task forces, deployments, secondments, and expert pools. The 3D approach also employs analytical tools, assessment frameworks, and coordination mechanisms informing and supporting the roles and responsibilities of various steering committees.

Appendix C: Dutch Lessons Learnt from CIMIC Operations

This section is a summary of lessons learnt from various NATO and specifically Dutch experiences discussing key aspects of CIMIC operations as described in Rietjens and Bollen (2008). It identifies lessons learnt which fit under the umbrella of the Dutch 3D approach, without synergising them into one coherent concept.

C.1. Structure following strategy – the strategic outlook of humanitarian assistance to the structures of CIMIC interfaces

NATO has placed for quite some time an emphasis on achieving military purposes with considerations of military operations other than war, including CIMIC, as being an add on requirement which supports the military mission. This philosophy has created some animosity and distrust on the side of the civilian aid community.

However, due to the complexity of recent and current conflicts, interrelated political, economic, development and security issues need to be addressed simultaneously. International approaches are evolving to increase the integration of efforts by civil and military actors alike. In order to organise and deliver an integrated effect, civil-military interfaces from strategic to tactical levels are required.

For example, short timeframes of deployment of international efforts and therefore rebuilding quickly using own resources quite often leave the local people that helped to forge peace in a region, feeling excluded from the reconstruction process. CIMIC interfaces are essential to ensure an adequate involvement of locals.

C.2. Travelling light – demand driven responses

Western military and other international organisations often bring with them western views and beliefs regarding their organisational and operational behaviour and what they want to achieve. However, a better approach should be utilised which is demand driven, where operations focus on the host countries' needs at national and local level. Understanding what the needs of the locals are requires the participation of local authorities, villagers and farmers. Including these actors in executing activities also increases capacity building, local ownership, sustainability and increased security, and will lead to a mission's longer term effectiveness. It is vital to have local participation right from the early stages of a campaign.

C.3. Multi-actor, multi-level nature of CIMIC – differences between strategic and field level responses

There is general consensus that an integrated civil and military effort is needed to successfully coordinate actions in order to achieve stability, relief and reconstruction. However, the difficulty arises in defining who is to coordinate whom and with whom. Various stances are available in determining the level of cooperation between two actors, from completely reliant on one another to completely independent. Some humanitarian organisations are reluctant to associate with military forces as they feel that by doing so they lose their neutrality in the eyes of the host population and are therefore less capable of achieving their goals. However, it is questionable how much the local population actually care who provides the assistance. *Save the Children* identifies four approaches humanitarian organisations may choose to adopt when

coordinating with militaries, 1) principled non-engagement, 2) arm's-length interaction, 3) proactive, pragmatic, principled engagement, and 4) active, direct engagement and cooperation. From military perspective there are also four categories of military-humanitarian interactions. These are called 1) reliance, 2) assistance, 3) autonomous and 4) adversarial.

The reliance relationship is where the humanitarian organisation depends on military support and without it would be incapable of achieving its mission. The assistance relationship is similar to reliance although the dependence on military support is reduced. Autonomous is where the humanitarian organisation requires no military support. They are able to operate independently; however, the military still needs to know their location and efforts. The adversarial relationship is one where the humanitarian organisation wishes to avoid the military, where they may despise them and even provide assistance to hostile entities. Examples illustrating these four civil-military relationship types in practice are also provided.

When the number of NGOs increases into the 100s, coordinating effort becomes extremely difficult and time consuming, and the quality of NGO operations becomes difficult to monitor. The same is true for military partners; with the number of coalition partners and their sizes varying substantially between missions, not to mention each having their own objectives, rules of engagement and additional caveats. It is also essential to ensure CIMIC occurs at multiple hierarchical levels.

C.4. Uncertainty reduction – the need for inter-organisational trust, guidelines and standards.

The cooperation between unfamiliar partners performing tasks which are highly interdependent in fluctuating complex contexts is of high concern. Especially considering that there is rather little on the mechanisms to govern this coordination process. As a result, the uncertainty between civil-military relationships is high.

Two possible mechanisms of reducing this uncertainty are described. The first is based on control; where standards and desired objectives are set, along with monitoring and reporting on progress and results. The second is about trust. A trustful relationship requires partners to depend on each other, even at times of great danger. Control and trust are complementary and when used together the trust component will allow a relaxation of attitude toward controlling mechanisms. Trust can be developed by diverging policies, information exchange and communication to all actors at all levels.

C.5. Training and education – development of comprehensive policies and integrated approaches requires training and education.

Following post-war Europe, NATO developed doctrine for CIMIC although they considered it marginal to military operations. However, by the late 1990s when NATO was involved in Bosnia and Kosovo, there were virtually no NATO members to deploy with sufficient CIMIC training experience. This suggests that increased CIMIC training is needed. It should be conducted in four phases; during training of officers and soldiers to raise awareness of differences between military and civilian actors, pre-deployment training specific to the intended area of operation, at the start of deployment (hand-over, take-over) to ensure former activities aren't duplicated,

and finally at a post-deployment phase where personnel record their lessons learnt. The lessons learnt should then feed back into the first training phase.

C.6. Performance measurement – identifying what should be measured, how and which criteria define success.

Defining performance in the context of an operational environment is difficult, as is identifying criteria for success. It is therefore not surprising that there is no agreed framework to measure CIMIC performance.

Four approaches for measuring performance can be considered, 1) where the performance focus is on each individual organisation based on budgets and number of completed projects, 2) designing performance measures based on shared resources and cost effectiveness, 3) using aggregate performance rather than individual performance (slightly more complicated when individual measures do not align with overall requirements), 4) the organisation of the civil-military interface focusing on primary activities, coordination, control, intelligence and policy.