

A COALITION FORCE SCENARIO 'BINNI – GATEWAY TO THE GOLDEN BOWL OF AFRICA'

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Abstract

Experience from recent coalition campaigns such as Somalia and Bosnia indicates the difficulties faced by force commanders in executing such missions. The diversity of conflict and agencies involved will continue to present challenges for future operations. The ground is therefore fertile for research and development of command and control technologies that will assist all levels of command to efficiently achieve coalition mission objectives. An important initial tool in this research is the development of scenario and task vignettes to enable researchers to tease out the issues and provide a basis for evaluating proposed technical solutions. This paper outlines a fictitious scenario that the author considers to be sufficiently diverse, yet representative of such future missions, that it can be adapted to a range of experimentation to provide a basis for future coalition planning and decision technology research.

Preamble

The Technical Co-operation Program (TTCP - <http://ttcp.acq.osd.mil>) between the Governments of Australia, Canada, New Zealand, The United Kingdom and The United States actively pursues international research collaboration on a broad range of topics of military interest. Technical Panel 9 (TP9) – Command and Control (C2) Systems Applications within TTCP C3I Group is developing a scenario to underpin research into the broad range of issues which are likely to influence the C2 effectiveness of future multi-national coalition force operations. This paper outlines the current state of development of this scenario. Its aim is to facilitate international experimentation in the interests of stimulating new

research and technology and establishing, amongst the potentially more diverse range of participants in such operations, an appreciation of the issues and the potential application of the resulting technologies. Its release to the wider academic community has been approved by TTCP member nations to facilitate such research.

A Changing World and Coalition Operations

From a UK perspective, the recent Strategic Defence Review¹ provides the background for developing new strategies for the resolution of future conflicts. The need for the development of a multinational coalition force approach to maintaining World peace is summarised as follows.

For the last two hundred years, the dominant force in international affairs has been the nation state. Most wars have been caused by attempts to create or expand such states. In contrast, over the next twenty years, the risks to international stability seem as likely to come from other factors: ethnic and religious conflict; population and environmental pressures; competition for scarce resources; drugs, terrorism and crime.

These pressures operate both within states and across borders. The break-up of states seems likely to be as much a security problem as traditional expansionism, although the recent Gulf War provides a powerful reminder that this should not be ruled out. Moreover, the consequences of initially local crises may spread dramatically throughout an ever more interdependent world.

The end of the Cold War has revitalised international bodies and made the 'international community' a reality. This is epitomised by the

increasing role of the United Nations in peace support missions. Such missions are now able to draw support from an unprecedented number of nations.

The 'peace dividend' arising from the collapse of the Warsaw Pact has resulted in the 'downsizing' of traditional military forces and the consequent 'Revolution in Military Affairs' is causing a reassessment of national military strategy and doctrine. Increasingly the emphasis is toward mobile integrated assets within the military forces of a nation and the coalition of such national forces under UN control to meet the emerging threats to world stability and peace.

War and Operations Other Than War

It is some 160 years since Clausewitz treatise on the strategy of war that has influenced the doctrine and tactics of military forces through two World Wars during this Century. Following the failure of diplomatic means for the resolution of disputes, the primary objectives of war may be summarised as;

- crush the enemy in defeat,
- deny him the logistic support to enable recovery of war making assets, and,
- convince the defeated of the justness of the victor's cause.

It is in winning the subsequent 'hearts and minds' campaign that the real difficulties lie for the lasting settlement of disputes and it is, so often, the atrocities of war that spawn and feed the deeply held animosities between neighbours which threaten future civilised behaviour. As Liddell Hart wrote: "The more I reflect on the experience of history, the more I come to see the instability of solutions achieved by force alone."

The collapse of the Warsaw Pact and the resulting reduction in the threat of Global War has served to reveal and stimulate the underlying local ethnic and cultural conflicts in a variety of differing locations which, if left to propagate, could seriously impact World stability. Conflicts which result in violence that impacts basic human rights and/or transcends national boundaries is a matter for United Nations attention where resolution can be debated and action taken under internationally agreed procedures. Where the maintenance of resulting agreements becomes an issue, the UN may impose sanctions and seek to enforce these by deploying a 'coalition force' comprising military and civilian personnel from a number of nations under a single command empowered to act on its behalf in preserving the

agreed settlement. The creation of a multi-national coalition force is desirable in order to give credence to the international nature of the agreement to the operation and to spread the burden of the commitment of resources. The coalition force commander is directly responsible to the Secretary General of the United Nations and acts within a formally agreed UN Directive.

The nature of such operations will span a broad range of missions from war through operations other than war (OOTW). The OOTW cover a range of missions where the UN Forces are not in direct conflict with Nation State(s) but are required to perform a 'neutral third party' operation. This is usually the result of a situation that is beyond the capability of the individual Nations(s) to resolve because it is an internecine issue or is beyond their individual resources. These may be further subdivided into war avoidance and humanitarian aid missions. The war avoidance operations cover the spectrum of 'policing' activities that are required to restore 'peaceful normality' in hostile situations between two or more population elements or State(s) in conflict. In these circumstances the UN Forces must act as an independent arbiter in discharging the associated UN Resolution and is therefore acting in the role of 'referee'. These operations are characterised by Rules of Engagement, which restrain the use of weapons in order to preserve the neutrality of the operation. Countering terrorism and international crime may also be considered to lie within such missions because they can also be a significantly destabilising influence and may require the co-operation of international agencies in order to limit their insidious effects.

Thus, war avoidance operations are primarily characterised by the resolution of conflicts by lawful means. Their key objectives are markedly different from those of war and, for the purpose of contrast with Clausewitz, may be summarised as;

- to promote the agreed UN solution to the dispute,
- assure the basic human freedoms and the rule of law, and,
- restore democratic processes and stability.

Achievement of these objectives requires a balance of diplomatic, political/civil and military persuasion.

International coalition operations present new challenges because they may need to rapidly respond to simultaneous geographically and globally diverse inflammatory situations. These operations will be critically dependent on effective command and control and the development of the underpinning information

technologies. Furthermore, the body of a coalition force may be drawn from a variety of nations whose political aims, national cultures, military procedures and training, will differ.

Planning is a key function in traditional military operations and is a well-established process. However, for war avoidance missions, it is further complicated by the need to consider the diplomatic, political/civil and military issues throughout the conduct of the operation. The need to agree and co-ordinate multi-national military and civilian resources with widely disparate experience, objectives and tasks and the attendant security implications and logistic requirements further compounds the actual process. Previous coalition operations have identified a wide range of problems from basic interoperability and doctrine through cultural issues resulting in differences of understanding, commitment and control. Furthermore, the spectrum of potential solutions and the dynamics of the solution environment mean that there will be multiple plans whose scope and interaction is complex and time variant. These issues will compound problems with the subsequent decision and execution processes. As if this is not a sufficient challenge to planning research, in the case of war avoidance missions and perhaps unlike the emergency planning for natural disasters, a ‘protagonist’ may constantly seek to exploit continuity of intent in a plan. This is further exacerbated when the new dimensions of conflict transcend conventional warfare by seeking to introduce progressively greater degrees of barbaric behaviour in order to achieve goals, embarrass the coalition operation, and frustrate a negotiated settlement. Thus the application of conventional war planning in such situations may be less than adequate and there is no norm for unconventional means. The challenge is therefore to develop planning strategies and technologies that enable past experience, resource conflict resolution and risk prognosis, to be conducted in a timely manner within a complex war avoidance mission environment.

Insight into the operational and technological issues can be obtained by simulating coalition force missions under controlled conditions. These exercises need to be based on a scenario which is sufficiently diverse to enable a variety of missions (e.g. war fighting, counter terrorism, restoration of normality, peace keeping, humanitarian aid etc.) to be evaluated. Such exercises should aim to enable operational effectiveness to be evaluated and expose capability gaps in procedures and complementary technologies.

Scenarios need to be stimulating to the imagination so as to reveal a wide range of implications for study,

yet remain within the bounds of credibility based on past experience. They should not cause offence to nations supporting the exercise or to others who may become aware of the exercise (either as a party to the results or otherwise). The aim therefore should be to create a scenario that is capable of evaluating supporting technologies for a diverse range of missions based on past experience and anticipation of potential future problems.

The Binni Scenario

With the above factors in mind, ‘Binni – Gateway to the Golden Bowl of Africa’ is a hypothetical scenario based on the Sudanese Plain. The countries of Gao, Agadez and Binni are fictitious, as are the events, organisations and personalities that lead to the crisis requiring UN intervention. However, it provides a backdrop against which to develop a number of exercises typical of those anticipated for future coalition force operations. The proposed scenario is outlined in the following paragraphs and the geography for orientation is shown in Fig. 1.

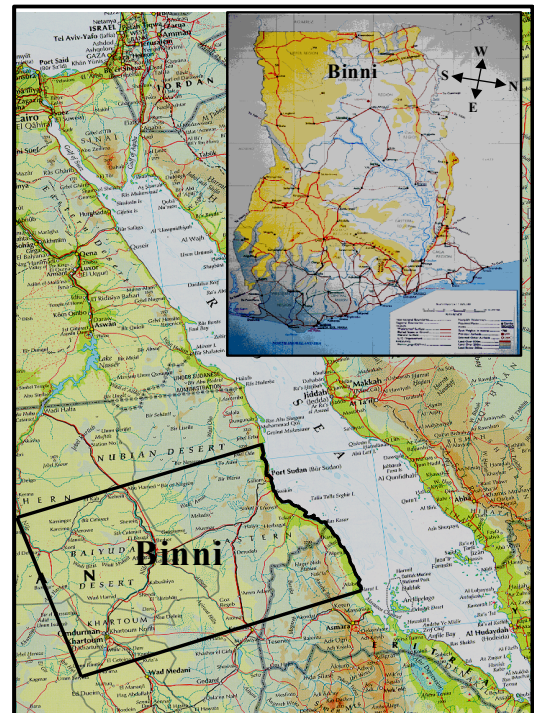


Fig. 1 Binni and its imaginary geo-location.

Binni – Gateway to the Golden Bowl of Africa

The new millennium heralded a time of unprecedented disturbance in World affairs. Changes in climate foreshadowed by the Pacific Ocean 'el Nino' in the late 1990's resulted in a series of natural disasters of unprecedented magnitude. These wrought havoc to the developed nations of the Northern Hemisphere. The progressive consequences of its Atlantic Ocean sister 'la Nina' and the resulting widespread destruction of property and the national infrastructures of Europe sent tremors through the financial markets resulting in economic crisis. Furthermore, the extremes in climate decimated farming and the food production industries. The resulting chaos, food shortages and consequent increase in prices led to economic unrest, hoarding and ultimately, rationing.

Meanwhile, the East African countries, to the South of 15 degrees North Latitude, were spared the worst excesses of 'la Nina' and the effects of the continued melting of the Antarctic ice pack. The result was a compensating moderation of the extremes of temperature and the resulting famine, which had so decimated the nomadic peoples of Sudanese Plain during the latter part of the 20th Century. As a result, the deserts bloomed and vast tracts of land which were uninhabited/uninhabitable became arable and itinerant people returned to their homelands to become farmers and landowners in an albeit primitive agrarian society. The local political leaders were quick to realise that 'the pendulum of fate' had swung in their favour and sought to take advantage by encouraging investment in agricultural production with the promise of arrangements leading to preferred sources of supply for the future. This naturally resulted in the influx of large foreign investments with the requirement for an increasing infrastructure to support and manage the resources and harvest.

However, the repatriation of these indigenous peoples caused unrest as tribal conflicts opened old wounds and attempts to oversee the reallocation of land by peaceful means often foundered. Boundary disputes frequently led to 'vigilante actions' and increasingly to open hostility between communities due to the absence of an adequate law enforcement infrastructure. Such tribal conflicts soon began to breach national boundaries with the resulting insurrection being addressed by the use of the respective national military forces. Increasing conscription and modernisation resulting from the perceived potential for economic prosperity enhanced these forces, especially those of Gao which, being on the Sudanese Plain, had suffered significantly from the ravages of famine and disease.

Furthermore, in recognition of the business opportunities and stability of climate, key industries of the industrialised nations began to decamp towards the areas of new development. The resulting migration of European staff and the consequent cultural and economic differences resulted in protective enclaves to ensure the safety of key staff. This inflamed the situation of mistrust and gave rise to feelings of resentment and exploitation, which added further fuel to the civil unrest.

The Crisis Deepens

As the regional agricultural programmes began to flourish, issues of transportation arose. The only way to transport the increasing volume of food to the European market was by sea, either through the Gulf of Suez or around Cape of Good Hope. However, Gao was effectively landlocked by Agadez as it contained the only deep-water harbours, at Sikasso and Costa del Maria, capable of handling bulk carriers. These seaports were in a state of neglect following the crisis resulting from the dispute between Gao and Agadez during 1998/2000 which had decimated the economies of the two countries and for which bitter memories existed between two former friendly governments. At the time, the battles between the two countries were particularly vicious in the Bandar region because of its benign sub-tropical climate, which was ripe for tourist development. In anticipation of the potential for revenue, Agadez had raised a substantial International loan from the World Bank. This was to develop the Port of Sikasso and the road and rail infrastructure to satisfy its internal need for transportation and distribution as well as a growing tourist industry centred on Costa del Maria and Laki.

Meanwhile, the importance of the developing 'African Wheat Bowl' was becoming clear and the need for efficient and timely transportation became a critical consideration for its European customers. Agadez responded by applying a significant tax on the transportation of food across its boundary. Gao was incensed at this additional cost burden which seriously impacted the economics of production and it therefore threatened military action. This resulted in a series of spectacular terrorist raids on the developments at both Bandar and Laki, which delayed the development programme and escalated costs, much to the concern of the European Nations and the World Bank.

Agadez was unrepentant; arguing forcibly that the additional facilities needed to handle the goods required a very substantial investment in its existing infrastructure. Furthermore, it was unwilling to accept this additional burden under its existing planned

development because, being primarily mountainous, it did not have a significant programme of agricultural development in the Bandar region.

A pan-Africa Congress attempted to mediate between the two countries, however, neither side was prepared to place any trust in the resulting discussions. This was because promises, made in good faith during the period of the Great Famine during the latter part of the 20th Century, were not kept by neighbour nations. Despite the efforts of the international community, many died of malnutrition.

Such was the resulting intransigence that both countries were prepared to sacrifice everything to 'win' and the prospect of war was immanent. The people of Agadez were experienced in the 'art of tribal war' waged across mountainous country, however, their equipment was limited although they were well positioned and fortified. On the other hand the people of Gao were traditionally nomadic and had little experience of significant conflict. However, by virtue of their new 'wealth' they were in the process of developing a 'defence force' with modern weapon systems but were still poorly trained in their use. The Northern Hemisphere Treaty Organisation (NHTO) military assessment indicated that if war were waged, the result would be protracted and could further decimate the population and significantly disrupt the developing agricultural infrastructure. This caused further alarm and consternation amongst the nations of the Northern Hemisphere.

The International Response

The international community responded by passing a series of UN Security Council Resolutions culminating in UNSCR 970. UN Military Observers (UNMO) were sent to monitor the situation and reported that both sides were regularly illegally breaching the established border. As a result tension was at an alarming level with atrocities being committed with increasing ferocity.

A peace conference was organized in Nairobi in 2009 where a fragile agreement on access to the sea was negotiated, but this was not sufficiently comprehensive and was broken when disruptions occurred to the flow of goods from Gao to the port of Sikasso. These disruptions were caused by repeated 'terrorist' attacks on road and rail convoys that were widely suspected of being conducted by clandestine agents of the Agadez Government. Those Gao products that did reach the port were often delayed by bureaucratic regulations to the extent that perishable

produce rotted on the dockside before it could be transported.

In desperation, Gao launched a preemptive strike to open up a corridor to the sea. Such was the audacity of the maneuver that it caught Agadez by surprise and was accomplished with little local resistance because the indigenous people bore a close affinity with their tribal brothers from Sudanese Plains. Immediately the borders had been established, Gao declared the annexed area to be the independent country of Binni. This action incensed the Government of Agadez and they launched repeated guerrilla activities to dislodge the Gao forces from Binni. The Provisional Government of Binni was quickly established and sought the protection of the UN in order to secure its stability. Gao, for its part, agreed to withdraw to its own borders once the security of Binni had been established, providing it could have assured access to the Ports of Sikasso and Costa del Maria.

At the request of the Gao UN representative, on behalf of the Provisional Government of Binni, a UN coalition peacekeeping force was established to enforce the Binni borders and the UN Secretary General, Dr Elmar Berwanger, appointed Ezekiel Ngebengo as his Special Representative.

Key Events

The key events underpinning the Binni scenario are summarized as follows:

Northern Hemisphere

April 2001. The first of the Western European climatic disasters resulting from 'la Nina'. Hurricane force winds and torrential rain causes widespread physical destruction and crop damage.

August 2002. Following a warm spring and summer, heavy snow and freezing temperatures decimate the harvest from the English Channel to the Russian Steppes. Movement in rural areas is paralysed for three weeks, followed by a rapid thaw and consequent flooding on an unprecedented scale. 'la Nina' strikes again!

June 2004. A detailed study by Climatologists concluded that 'la Nina' would be a recurring event.

July 2005. The European Commission on

Agriculture declares a crisis in agricultural production for Central Europe.

September 2007. The United Nations Special Commission on Agriculture reports a 20% reduction in World cereal production.

Sudanese Plain

September 2002. First significant harvest for 20 years stems the flow of refugees totally dependent on humanitarian aid.

January 2004. Significant migration of peoples returning to their Sudanese homelands.

March 2006. First major investment in the Sudanese Plain by the World Bank following receipt of a multinational plan for the development of agriculture in the 'Golden Bowl of Africa'.

December 2009. Completion of the first regional centre for technology and commerce formalises the reality of the 'Golden Bowl'.

Military Activities

1999 – 00. The Battle for Bandar where Gao was soundly defeated after a valiant attempt to protect its territory from repeated threats by Agadez forces who were bent on a vigorous policy of expansion along its coastline. Bandar, and Sikasso, which was being developed as a deep-water harbour at the time, sustained substantial damage.

2000 – 01. The saga of the epic trek by the Banu Mountain People from the Tibesti Mountains in the northern region of the Sudanese Plain to the foothills of Agadez in search of food and shelter. Many died on the way and the remaining survivors were met with bitter resistance. With little to defend them, all but a few of the remainder were slaughtered. The World Press describes the appalling events as genocide. This resulted in a significant 'backlash' against the international community for not providing more disaster relief to prevent the human suffering amongst those refugees who were unable to be accommodated within the humanitarian relief centres.

July 2001. Midnight explosion and fire at the Alexandria hotel in the Laki Safari Park. Thirty-four visitors died and seventy-two were injured. No warning was given and no responsibility was claimed, however, it was widely suspected that it was the work of a terrorist group probably in reprisal for the events that befell the Banu Mountain People.

2003 – 06. Tribal wars between indigenous peoples returning to their homelands. These were ultimately resolved by the formalisation of land ownership and economic grants for land development.

2005. The battle for Gambela between Gao and Agadiz forces where 5000 square miles of potentially fertile valley was lost by Gao as a direct result of deploying newly acquired superior weapons in poorly trained hands.

February 2011. Gao initiates a pre-emptive strike to recover Bandar and its surrounding area. The military lessons of the past had been well learned, experienced mercenaries were used to command its new army that was now well trained and logistically supported. The resulting victory was warmly welcomed by the local inhabitants however, the defending forces of Agadez simply retreated to the 'bush land' to conduct a guerrilla campaign.

Gao Development Milestones

June 2003. Major land survey and development of transportation networks comprising roads and waterways.

July 2004. Major foreign investment for agricultural equipment manufacture.

January 2005. Foundations laid for the construction of the first nuclear power plant.

October 2005. Development of a major oil refining plant and pipeline from the Arabian Oil Fields.

July 2007. Integrated communications infrastructure established over 60% of the developed region.

Political Milestones

September 2009. Nairobi Conference – provisional resolution of the border dispute between Gao and Agadez. However, the agreement was short lived.

May 2011. Declaration of Binni as an independent territory under the protection of Gao. This was done in preparation for full independence because Gao did not wish to commit its diminished resources to its long-term protection in the face of continuing hostilities with Agadez and equally pressing matters with maintaining its boundaries elsewhere.

October 2011. The democratic government of Binni elected and given international recognition.

November 2011. Binni seeks UN support for preserving its nation status in the presence of continuing threats from Agadez.

December 2011. The UN establishes a Peacekeeping Mission to Binni comprising a coalition force charged with establishing ‘normality’ and the restoration of diplomatic relations between all parties.

Personalities

May 1991. George Akimbo elected President of Gao.

January 1996. General Abbi el Hiafa Supreme Ruler of Agadez. Succeeded King Siddi Accaba hereditary ruler who was murdered in a bloody military coup de tat.

October 2011. Joshua Ubngli elected Prime Minister of Binni

Binni Scenario – The First Vignette

The above scenario outlines the background to the creation of the new state of Binni. This first vignette is aimed at developing a rationale under which a UN commanded multi-national force is deployed to quell the opposing forces and restore the situation to enable discussions leading to a negotiated settlement of territories in dispute. Initially the scope of the vignette is constrained to deal with issues associated with the operational planning and logistic support of the forces to be deployed and is designed to tease out the issues resulting from such deployments in a typical coalition

war avoidance operation. However, it should also be detailed enough to be applied to evaluating the tools required to decide upon the resulting operational strategies and then to exercise them.

The general issues to be considered are:

- Planning and decision making in an uncertain environment where information is sparse, conflicting and even false/malicious (mis-information and dis-information).
- Situations involving multiple options at all levels of the potential course of action (COA).
- Application of planning quality criteria which may vary with time.
- Initial planning initiatives may be in place for longer than expected and be subject to incremental expansion/adaptation.
- Plan robustness, planning for success and preparing for failures.
- Operational vulnerability associated with failures in the plan, or failure to plan, which requires a considered definition and appreciation of risk.
- Timeliness and synchronization of forces to maintain an operational advantage.
- Measures of operational awareness/effectiveness to assist in determining how well the plan is working and what may be needed to improve the situation as the plan unfolds.
- Diverse issues of interdependence and constraints associated with the deployment of assets in OOTW operations.
- Uniqueness of operations and their relevance to future missions in terms of lessons learned.
- Planning and conduct of operations under the ‘spotlight’ of World media scrutiny and UN accountability.
- Conflicts and uncertainty of goals associated with operations involving multi-national and multi-agency coalition partnerships.
- Politico/cultural aspects which define the concept and approach to the operation and its planning.
- Language and semantic issues associated with rationalizing the problem because of the diverse composition of the team.
- Establishing an experienced competent/innovative and co-operative ‘team’ capable of planning and executing the required mission.

The First Vignette - A Littoral Operation in Response to a Crisis under a UN Mandate.

Following the declaration of Binni as a separate state and the seeking of UN support, terrorist elements suspected of belonging to the Agadiz guerrilla force

that had been engaging the Gao forces in the central part of Binni ran amok and attacked the Alexandria hotel in the Laki Safari Park in reprisal for UN intervention. In the ensuing melee, an entire detachment of twelve armed Binni militia and twenty-three visitors were murdered. A further twenty-one were taken hostage including the two teenage daughters of Joshua Ubngli, the newly elected Prime Minister of Binni. They were attending a South American University and had come on a two-week pre-Christmas safari with a party of naturalists under the aegis of the World Foundation for the Protection of Wildlife (WFPW).

In desperation to slow the rout by the Gao forces, the Agadiz terrorists poisoned the water course in the region of conflict at several points leading to the fertile lowlands and the industrialized coastal region of Binni. This resulted in the death of hundreds of the indigenous population, their livestock and local wildlife. The impact of this is of serious concern to the World Organization for Health (WOH) as the cause of the deaths is a toxin of 'unknown origin' which is suspected of being created by a Middle Eastern terrorist group with links to Agadiz terrorists over the Internet. This resulted in the immediate need for 'expert' analysis by the WOH that can only be conducted 'on site' at substantial risk to the investigators. The uniqueness of the situation means that there are only two known specialists with the experience necessary to deal with the field issues surrounding the problem and their access to the affected regions and protection during the subsequent UN operation is of paramount importance.

Furthermore, in their retreat, the Agadiz forces ambushed the following Gao forces and rounded up a herd of two hundred and fifty elephants, thought to have been used for obstacle clearance, and started a stampede which resulted in the whole herd being forced over a cliff at the Binni Gorge. This is a local beauty spot, popular with tourists, and at which the WFPW President had recently dedicated an 'elephant feature' in recognition of the work being done for wildlife by the Laki Safari Park. This brutal act incensed naturalists throughout the World and the resulting carnage was captured by World Television News (WTN). This further increased public sympathy and support for action by the UN.

Intelligence from a variety of sources reveals that, in retreat, the Agadiz forces are moving toward a major re-supply area just over the Binni/Agadiz border where substantial reserves are being amassed. The Gao forces seem oblivious to the resulting risk and are in pursuit with maximum haste to try to defeat the

Agadiz force 'once and for all'. This is driven by anger at the previous events and a fierce sense of pride in their rout of a potentially superior force. It is also complemented by the fact that local tribesmen who are bent on revenge for Agadiz Army atrocities on their women and children are aiding the Gao force. The ensuing melee is becoming increasingly difficult to control and in the resulting chaos 'old scores are being settled' between local tribes with the risk of civil war breaking out in the absence of a regional infrastructure to contain it. The overriding UN concern is that what seems like a victory for Gao could actually result in another massacre leaving Binni vulnerable to once again being overrun by Agadiz forces following their imminent regrouping. After extensive debate in the UN it was concluded that a period of calm is desperately needed to break the cycle of violence and allow the 'organs of state' to develop within Binni so that a stable infrastructure can be established.

The UN Resolution

As a result of the dangerously unstable situation that had developed in Binni, the UN passed Resolution 955 to create and deploy a UN War Avoidance Force for Binni (UNWAFB). This is composed of the military resources from four UN member nations supplemented by advisors and personnel (e.g. language/dialect and cultural specialists' etc.) from the international community. The resulting mandate is to:

- Enforce a no fly zone in the region of conflict.
- Stop the Gao forces in the rout of the Agadiz forces.
- Stop the Agadiz forces from reaching the re-supply area and negotiate the dispersal of additional forces and supplies.
- Rescue the hostages from the Agadiz terrorist forces by negotiation or forceful means if reasonable negotiation tactics fail or the hostages are further threatened.
- Survey the area of contamination by the unknown toxin, identify its dispersion characteristics and assess population/wildlife environmental effects.
- Establish a total exclusion zone (TEZ) between opposing forces.
- Attend to the sick/injured and arrange safe enclaves for the displaced in the local population. Prepare the way for medical and humanitarian aid organizations.
- Negotiate a settlement between the warring factions.
- Collect evidence for subsequent international criminal proceedings and reconciliation of the distressed population.

Despite considerable debate, the UN could not agree on the order in which the items in the mandate should be conducted and it was therefore left to the UN Commander to establish priorities for the operation in accord with the prevailing circumstances. However, there are initial competing pressures for the planning and conduct of the necessary actions due to limitations on the scale of the initial UNWAFB force. UN agreement to the reinforcement of these resources is dependant upon the Commanders initial assessment of the situation and the likely additional resources would take a minimum of two weeks to mobilize. The immediate constraints/issues are summarized as follows:

- Safe recovery of hostages - this is understandably of personal interest to Mr. Ubngli the Prime Minister of Binni who feels a grave concern for the welfare of his two daughters. He has therefore insisted that he be consulted at every stage of the mission and that his personal representative Major Jean Ngkronu, an ex-North African Foreign Legion officer, is an integral part of the mission planning exercise. He has advised that failure to meet his demands will result in denial of access to information being collected by an extensive web of informants throughout Binni which would be invaluable to planning and executing the UNWAFB mission. The reasoning behind this is thought to be that, if thwarted, he would pursue a unilateral action to recover the hostages that could jeopardize the other aspects of the operation.
- Cessation of hostilities and establishment of a TEZ - NHTO advise this as the highest priority because the anticipated impending massacre of the Gao forces would perpetrate a civil war in which increasing levels of UN forces would become embroiled. UN and NHTO experience of conflicts in Europe during the 1990's remain a powerful reminder of the political, military and humanitarian difficulties and consequences of planning and executing such campaigns.
- Recovery, assessment and analysis of the unknown toxic agent - the WOH advises that the development of suitable countermeasures is of critical concern because of the relative ease with which this new threat to life has been developed and the devastation caused as a result of its initial deployment. Furthermore, other terrorist groups sympathetic to Agadiz have threatened to use this toxin in a mass attack against selected targets probably centering on the UNWAFB CF nations. The International Police Organization (IPO) has identified this as a real threat and warns that urgent action is essential to avoid an urban catastrophe.

Current Status of Forces

Gao - The Gao Army is known to have deployed some 12,500 active troops in the current conflict comprising primarily infantry armed with relatively modern portable weapons including rocket launchers and heavy mortars. Of these, some 3000 have been killed or injured to date. However, these have been complemented by an estimated 4500 'irregular' militia recruited from the local tribesmen as they advance across Binni. Transportation is difficult with few surfaced roads and is provided by all wheel drive trucks and long wheel base general-purpose vehicles that are fitted with light machine guns. They also have thirty armoured personnel carriers that are equipped with heavy machine guns but there are no Gao tanks or heavy field weapons deployed in the present conflict. The Gao Airforce comprises some 90 military aircraft of which 30 are lightly armed trainers and the rest are a mixture of fast jets for ground attack, air interdiction and a fleet six of heavy transport aircraft for air supply. More aircraft are on order but there is some difficulty in establishing a trained base of pilots with the requisite skills. For this reason the Gao Air Command is reluctant to engage the Agadiz Airforce in combat and the use of air support is restricted to attack and reconnaissance within the cover of Gao radar and SAM sites on the Gao border with Binni.

Agadiz started the present conflict with 15,000 troops distributed across the mid region of Binni from the Agadiz border to within 15km of the Gao border. At present they have been driven back to within 100km of the Agadiz border and their strength is now some 8,000. The current Agadiz 'forward line own troops' (FLOT) is 60km wide and 200km from the Binni coastline. Whilst the Agadiz force is still well armed they are in retreat due to the pressure of the Gao forces coupled with some excellent tactical maneuvers executed by the mercenary element of the Gao Army. They have however lost a significant number of weapons and these have been used to equip the Binni 'irregular' militia that is assisting in the rout. Intelligence reports suggest that they have some 90 tanks and a significant number of heavy field weapons arranged along the Agadiz border. Furthermore, reconnaissance suggests that a back-up force of 18,000 well-armed fresh troops is being recruited from the western border with Gao to 'turn defeat into victory' and re-establish their occupation of Binni. Western intelligence analysts suggest that a trap is being set for the Gao forces however its precise nature is unknown.

Agadiz has a significant Airforce that has been established over many years with a resource of

excellent pilots who have been trained in Eastern Europe. However, their aircraft are aging fighters and trainers and their tactical experience is somewhat limited because they have been the dominant air power in the region for the past 20 years. They operate regularly in the combat region but do not venture too close to the Gao borders because the Gao SAM sites have recently had some success.

Agadiz does not have a Navy of any significance although it does operate a number of fast patrol boats for inshore protection and these are equipped with radar, heavy machine guns and are known to carry a variety of mines for shallow water deployment. However, it is not known whether any of the Binni inshore coast has been mined.

The battlefield terrain is becoming increasingly difficult, comprising a mix of hills with steep escarpments, swamp lands and dense forest/jungle growth. Radio communication is poor between command and forward troop locations to the extent that co-ordination is difficult and engagements between forces is increasingly problematic although there is still considerable hand to hand combat with heavy casualties on both sides. The rate of progress of the Gao forces remains relatively consistent at some 15km (plus or minus 5km) per day. It is therefore estimated by the Gao Command, despite advice to the contrary from both their Mercenaries and the UN observers in Bandar, that they will achieve a 'victory' within six days.

UNWAFB Force Composition

The initial UN Force that has been detached from an International Mediterranean Fleet comprises an aircraft carrier with a limited complement of aircraft (8 VSTOL, 10 helicopters, 12 air superiority fighters and 4 reconnaissance aircraft), a supply ship, a mine counter measures frigate and twelve landing craft. The troop complement is 800 Marines and twenty-five Special Forces personnel experienced in operations behind enemy lines and the recovery of hostages in siege situations. There are six UN observers and political advisors together with two civilian experts specially flown in to deal with the unknown toxin. The fleet is currently holding station some 40km offshore from Costa del Maria on the Binni coast.

Operational Conditions

The current date is Monday 19th December 2011, it is therefore early winter and storms are forecast for the next two weeks. There has been considerable rain in

the region of conflict and the terrain is becoming increasingly difficult. Low level flying and high level reconnaissance missions will be limited especially in the mid-afternoon period when Gao and Agadiz forces are likely to be moving. There is a significant threat of the side effects to 'la Nina' storms in the region of the Red Sea which will make operations from the UNWAFB Fleet difficult over the next ten days.

Humanitarian Issues

It is estimated that during the twenty-five days of the current Gao/Agadiz conflict, some 72,000 civilians have been rendered homeless and are currently hiding in remote areas without proper shelter or food. This situation has been exacerbated by the poisoning of the watercourses by Agadiz terrorist elements with the consequent death of cattle and other domestic animals. Some 90 staff from the UN Aid Agencies are being transported by land from Gao to set up the initial humanitarian aid support camps across Binni. Their safety and welfare will also be the responsibility of the UNWAFB Commander.

Operational Planning

Steps to be considered in planning the operation are:

- Establish the facts and likely issues - maximize the available intelligence/information.
- Assess the quality and timeliness of the facts on which the plan is to be founded and from which a situation awareness brief and the supporting knowledge base can be developed.
- Assemble the mission planning team comprising core elements and specialists.
- Build a planning knowledge base of fact, constraint and hypothesis. Identify suitable AI planning and decision tools to facilitate the development and execution of operational plans for the intended mission.
- Outline multiple 'skeletal' plans with perceived strengths and weaknesses.
- Conduct a brainstorming session with the mission planning team to determine a plausible COA.
- Select and develop a sub-set of the COA to operational status, including logistic support, MoE and expectation of risk.

Conclusions

The background to possible future military OOTW together with a fictitious scenario and vignette for

military command and control research has been outlined. This is being used by TTCP C3I Group to provide a framework within which to construct a series of experiments to better understand the issues and the application of technologies to future coalition operations. It is under constant development by TP9 and is currently being used to assist in defining the ontology for such missions and the associated information requirement structures. The immediate aim of this work is to support the development of collaborative planning and decision technologies for such operations. Further vignettes are planned to stimulate international research into a diverse range of military/civil coalition operations. These will aim to test the strengths and weaknesses of the developing technologies under differing situations from, establishing the cessation of hostilities, to the restoration of normality.

Postscript

Reference has been made to the cultural issues associated with coalition operations and fact that some of the difficulties lie in establishing a common perception and mechanisms for planning and achieving mission goals. The anthropologist, Thomas Gladwin, in his discussion of Trukese navigation gives an interesting insight into cultural differences associated with resolving problems.

Gladwin contrasted the ways that a European and a native Trukese sailor navigated small boats between tiny islands in the vast Pacific Ocean. Before setting sail, the European begins with a plan that can be written in terms of directions, degrees of longitude and latitude, estimated time of arrival at separate points on the journey. Once the plan is conceived and completed, the sailor has only to carry out each step consecutively, one after another, to be assured of arriving on time at the planned destination. The sailor uses all available tools, such as a compass, a sextant, a map, etc., and if asked, can describe exactly how he got where he was going.

In contrast, the native Trukese sailor starts his voyage by imagining the position of his destination relative to the position of other islands. As he sails along, he constantly adjusts his direction according to his awareness of his position thus far. His decisions are improvised continually by checking relative positions of landmarks, sun, wind direction, etc. He navigates with reference to where he started, where he is going, and the space between his destination and the point where he is at the moment. If asked how he navigates so well without instruments or a written plan, he cannot possibly put it into words. This is not

merely because the Trukese are unaccustomed to describing such things in words, but also because the process is too complex and fluid to be put into words.

Paredes and Hepburn² explain the difference in strategies and they conclude that the European and Trukese navigators use the left and right sides of the brain respectively.

Thus, to plan is the sequential and logical rationalization of a problem. Once a plan or plans have been formulated, a decision based on agreed criteria must be made to implement it. The resulting plan will then attempt to impose a solution on the problem (either rightly or wrongly). The further one progresses with the plan and the commitment of resources, the more difficult it may be to change it.

Logically, the plan will be judged a success or failure in terms of the criteria set during its formulation and the resulting accountability will be assessed on the basis of the actions taken in discharging it. In human conflict situations, the ability to plan and threaten a credible counter maneuver may itself act as a deterrent to the conflict causing the respective parties to search for a peaceful settlement.

The concepts of the rights of the individual and the rule of law are fundamental to planning and decision making in the resolution of human issues within the UN view of civilized behaviour in an established society. However, when a society is under threat, the problem may not be capable of rationalization in terms that lead to a logical plan and the search for a solution may follow somewhat more evolutionary processes where the course of action is decided as events unfold. Whilst this strategy does not necessarily imply violation of 'just means', it can result in a reduction in accountability if actions are not premeditated and subject to scrutiny before they are carried out. Although, such approaches can engender a degree of flexibility in response (even to the point of exploiting weakness where the opposition has a plan), the absence of a plan suggests that the outcome may be somewhat more problematic. Such situations could be categorized as solutions by 'natural selection'. However, the methods involved in 'survival of the fittest' situations may, regrettably, be promoted by the more base instincts in the human psyche.

A left and right side is basic to the physiology of the human brain and undoubtedly all cultures rely to a greater or lesser extent on 'Trukese navigation'. However, on the premise that the resolution of human conflict problems in the post Cold War era will require somewhat different management strategies to those of

the immediate past, future coalition mission management concepts must be capable of dealing with problems of diverse cultures trapped in unstable societal situations where solutions need to be found through negotiated settlement rather than imposed sanction. To this end, in an increasingly 'information rich' environment, the resulting command and control processes must be responsive and robust without compromising perspective, accountability and the justness of intent.

For the encouragement of those pursuing research into the diverse issues surrounding future coalition C2 operations, Kipling has some words of wisdom: -

Two Sided Man: -

Much I owe to the lands that grew
More to the lives that fed
But most to the Allah Who gave me Two
Separate sides to my head.

Much I reflect on the Good and the True
In the faiths beneath the sun
But most upon Allah Who gave me Two
Sides to my head, not one.

I would go without shirt or shoe,
Friend, tobacco or bread,
Sooner than lose for a minute the two
Separate sides of my head!

Disclaimer

The purpose of this paper is to stimulate debate and experimentation within the scientific community. It is hoped that this will result in a better understanding of the issues and the development of improved command and control methods for supporting future coalition operations. To this end, the views expressed are those of the author and do not necessarily represent the official position of TTCP member nations.

References

1. Strategic Defence Review – 1998 HMSO.
2. Paredes and Hepburn "The Split-Brain and the Culture-Cognition Paradox" {Current Anthropology 17 (March 1976): 1}