



The difficulty to document agility evidences from a C2 perspective

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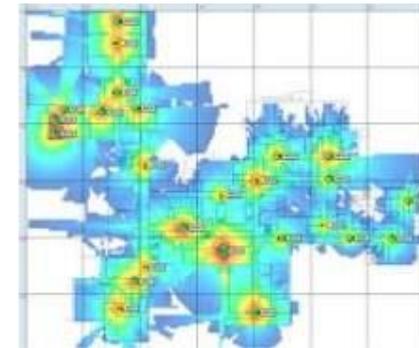
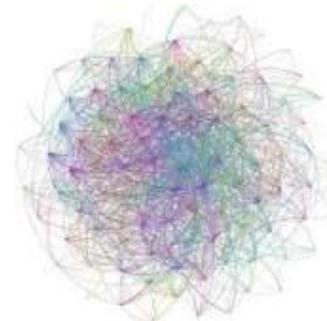
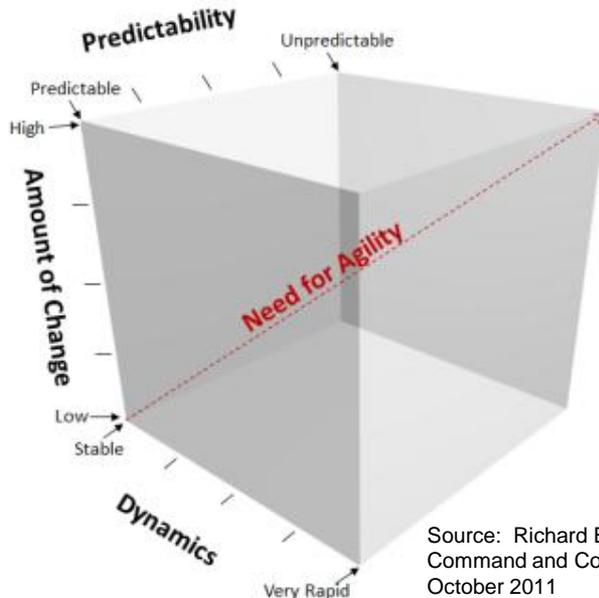
Outline

- Context
- Approach
- Examples
- Findings
- Future work



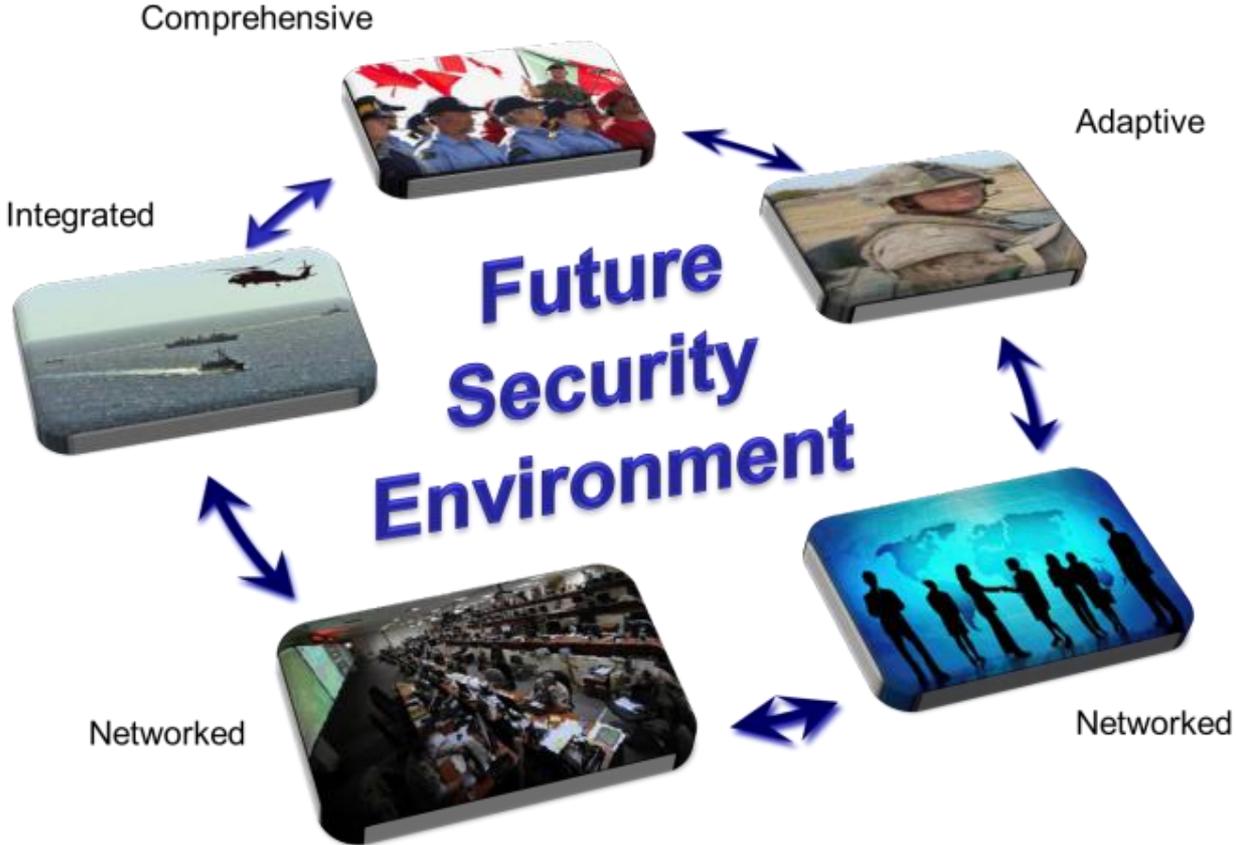
Operating Contexts

- Large numbers of interacting entities
- Rapid rates of change (dynamics)
- Irreducible uncertainty
- Limited information (insufficient)



Source: Richard E. Hayes, Agile Command and Control. TIDE Sprint. October 2011

Integrated Capstone Concept



SAS 085 - C2 Agility and Requisite Maturity



■ Objectives

- Understand the implications and validate the need for C2 Agility for NATO missions
- Match the characteristics of C2 Approach options to situational attributes
- Support the dissemination and understanding of C2 Agility concepts

■ Leveraging

- SAS-050 C2 Conceptual Reference Model
- SAS-065 NEC C2 Maturity Model

**Agility is the capability
to successfully effect, cope with and/or exploit
changes in circumstances**

C2 Agility and Enabling Factors: Agility Significant Influences

MISSION CHALLENGES

AGILITY

C2 QUALITIES

MCP CHARACTERISTICS

C2 Approach

People

Training, Experience, Education

Materiel

Quality of Intent

Quality of Decisions

Quality of Execution

Quality of Planning

Robustness

Responsiveness

Flexibility

Innovation

Adaptation Process Organization

Resilience

Adaptation: the ability to change work processes and the ability to change the organization.

Resilience: the ability to recover from or adjust to misfortune, damage, or a destabilizing perturbation in the environment

Innovation: the ability to do new things and the ability to do old things in new ways

Breadth of Mission Spectrum

Fleeting Opportunities (Pace of Δ)

Consciously Asymmetric Adversity

Situational Mismatch

Adversary Initiative/First Strike

Novel Circumstances

Versatility (Robustness): the ability to maintain effectiveness across a range of tasks, situations, and conditions.

Responsiveness: the ability to react to a change in the environment in a timely manner

Flexibility: the ability to employ multiple ways to succeed and the capacity to move seamlessly between them

C2 Approaches

C2 Approach	Description	C2 Tasks Required	C2 Capabilities Required
Edge C2	<p>The entities are engaged to the collective effectiveness.</p> <ul style="list-style-type: none"> self-synchronisation of the collective self-organisation of each entity to achieve common intent. 	Development of shared intent, awareness, and understanding	Development of a rich, shared understanding of the common intent as well as the different entities. Self-synchronisation of the collective, self-organisation of each entity. Robust, secure, ubiquitous, interoperable, infrastructure that extends to all participating entities
Collaborative C2	<p>The entities are looking to maximize overall collective effectiveness.</p> <ul style="list-style-type: none"> collaborative development of a shared single plan that will achieve common intent 	<p>Development of common intent, shared understanding and trust</p> <p>Development of a single integrated plan, and parallel development of entities' plans that are synchronized with the overall plan. The different entities' resources are being used for the benefit of the mission</p>	Establishment of a set of collaborative processes, supported by a sufficiently robust and extensively distributed collaborative environment available to all appropriate individuals and organisations. A high degree of interoperability in all domains needs to be achieved in order to develop sufficient levels of shared awareness and understanding (dynamic IERs on a need-to-share basis)
Coordinated C2	<p>The entities consider the increase of the overall collective effectiveness.</p> <ul style="list-style-type: none"> development of some common intent leading to an agreement about linking actions in the various plans developed by the different entities; 	Development of a limited degree of common intent and development of links between and among individual plans and actions	Establishment of a coordination process. Requires sufficient communications, information-related capabilities involving the appropriate individuals, and necessary information exchanges (fixed IERs on a need-to-know basis)
De-Conflicted C2	<p>The entities of the collective C2 are trying to de-conflict their intents, plans or actions. The aim is to avoid negative impacts between and among the entities. Accordingly, they first need to recognize potential conflicts. Partitioning of activities, space, time and/or resources may be one approach to resolve the conflicts</p>	Identification of potential conflicts and resolution of conflicts by establishing constraints and/or boundaries	Limited communications involving limited individuals and limited information exchanges restricted to constraints and seams (strict Information Exchange Requirements (IER) on a need-to-know basis)
Conflicted C2	There is no collective C2. Each entity is working independently of the collective	No specific C2 tasks	No specific capabilities

C2 Approach Dimensions

C2 Approach	Allocation of Decision Rights <i>to the Collective</i>	Patterns of Interaction Among Participating Entities	Distribution of Information (Entity Information Positions)
Edge C2	Not Explicit, Self- Allocated (Emergent, Tailored, and Dynamic)	Unlimited As Required	All Available and Relevant Information Accessible
Collaborative C2	Collaborative Process and Shared Plan	Significant Broad	Additional Information Across Collaborative Areas/Functions
Coordinated C2	Coordination Process and Linked Plans	Limited and Focused	Additional Information About Coordinated Areas/Functions
De-Conflicted C2	Establish Constraints	Very Limited Sharply Focused	Additional Information About Constraints and Seams
Conflicted C2	None	None	Organic Information

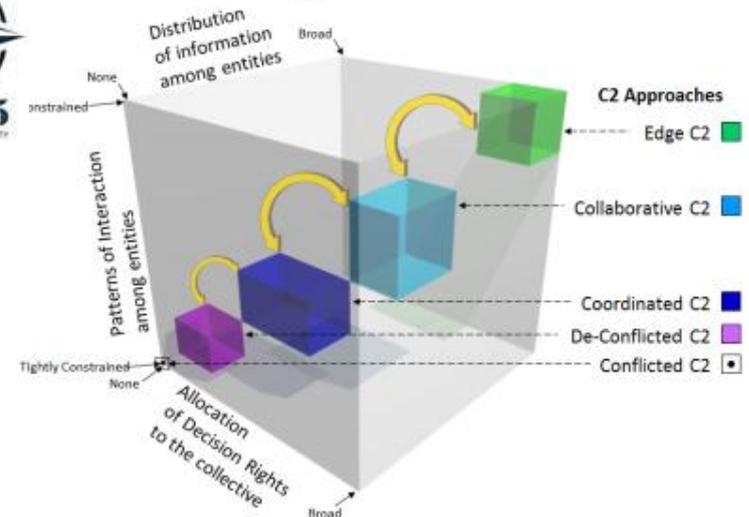
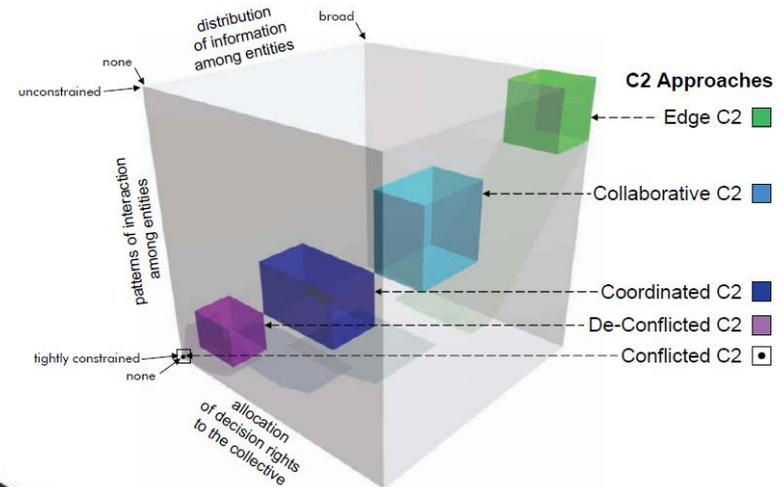
C2 and Agility

Agility of a C2 approach

the capability of a C2 approach to successfully effect, cope with and/or exploit changes in circumstances

C2 Agility

the capability to identify and applies the appropriate C2 approach to successfully effect, cope with and/or exploit changes in circumstances



Approach to Document Evidences of C2 Agility

Change of Circumstances



Unsatisfactory State



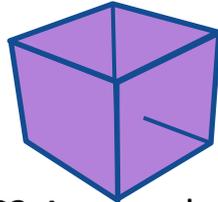
Activity/Event
made possible



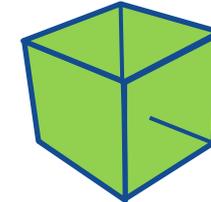
Satisfactory State



Timeline



C2 Approach A



C2 Approach B

■ Identification of C2 approaches can be done using

- The dimensions of the C2 approaches: Allocation of decision rights (ADR), Patterns of Interaction (Pol) , Distribution of Information (DoI);
- The C2 tasks required for a specific C2 approach;
- The capabilities required to implement a C2 approach

Case Study – United Nations Mission for Rwanda (UNAMIR)

■ Event Analyzed

- Massive Rwanda Genocide executed by Hutu extremists against Tutsi in 1994

■ Location

- Central African State of Rwanda

■ Temporal boundaries of the study

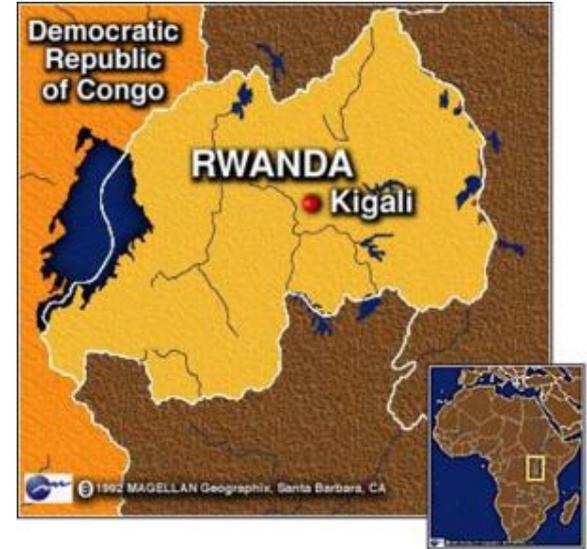
- 22 October, 1993 – 19 July, 1994

■ UN Mission

- To assist in implementing peace accords between the Rwandan government (controlled by Hutus) and the RPF.

■ Opposing Forces:

- Rwandan Armed Forces (FAR), the National Republican Movement for Development (MRND) Party and their allies on the one hand
- Rwandese Patriotic Front (RPF) and their allies on the other hand



Timeline (5th of October 1993 – 19 July 1994)



■ October 1993:

- The United Nations sent a lightly armed peace-keeping force to Rwanda to assist in implementing peace accords between the Rwandan government (controlled by Hutus, the country's largest ethnic group) and the Rwandese Patriotic Front (RPF). Commanded by Canadian General Roméo Dallaire, UNAMIR comprised 2500 troops who were forbidden to use force except in self-defence.

■ April 1994:

- On **April 6, 1994**, the president of Rwanda was killed when his plane was shot down.
- **Belgium** – a key UNAMIR contributor- promptly **withdrew its forces**.
- Two weeks after the Belgian soldiers were killed, **the UN Security Council cut UNAMIR back to 270 troops, making no change in its mandate**. “They are forbidden to intervene, as this would breach their “monitoring’ mandate”.



■ May 1994:

- Not until May 17, 1994, amid a growing international outcry,
 - UNAMIR's mandate was expanded by Security Council *to enable it to contribute to the security and protection of refugees and civilians at risk, through means including the establishment and maintenance of secure humanitarian areas, and the provision of security for relief operations to the degree possible*
 - UN finally **agree to send 55000 troops** (UNAMIR II) to Rwanda. But disputes over **costs delayed** the troops' deployment.

■ June 1994:

- On June 22, 1994, the U.N. Security Council authorized France to deploy 2500 troops (Operation Turquoise) to Rwanda as an **interim peacekeeping force**, with a **two-month U.N. mandate**.

■ July 1994:

- **The war ended on July 18, 1994**, The RPF took control of a country ravaged by war and genocide.

Result

- On a population estimated to 7.9 million before the war:
 - Up to 800,000 people had been murdered
 - Another 2 million or so had fled
 - Another million or so were displaced internally
 - 47,000 children had been orphaned
 - Over 250,000 women had been raped
- Operation fatalities
 - 3 military observers, 22 other military personnel, 1 civilian police , 1 local staff
- UNAMIR: Mission Failure according to Gen Dallaire
 - "I failed, yes. The mission failed. They died by the thousands, hundreds of thousands."
- Did Agility allow to save people life?
 - Saving of 30000 Rwandans from both sides that were under UNAMIR'S protection



Level of Analysis

■ Organizations Involved

■ Within Self

- UN Headquarters – in New York City
- UNAMIR HQ in Rwanda
 - Secretary General's Special Representative (SRSG)
 - Commander of UN forces in Rwanda: Gen Roméo Dallaire
- Contingents provided by Belgium, Ghana, Bangladesh, France
- Member states

■ Within the Collective

- UNAMIR HQ in Rwanda
- Media

Example 1 : UNAMIR HQ – UN DPKO



Collaborative



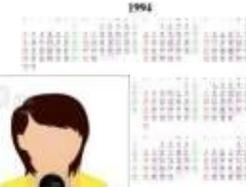
Edge

	ADR	PoI	DoI	C2 Tasks	Capabilities
Collabo- rative	Options/ Recommendations developed mainly by UNAMIR HQ in consultation with DPKO	As required	UNAMIR to DPKO: all available and relevant info DPKO to UNAMIR Info about collaborative areas	Development of common intent, shared understanding and trust, development of a single integrated plan	Dynamic IERs on a need-to-share basis
Edge 	Distributed: UNAMIR HQ decided to protect the current as well as the future prime ministers of Rwanda without consultation with DPKO	UNAMIR to DPKO	All info available	Leveraging on the shared intent, awareness and understanding that already exist	Self-synchronisation to achieve common intent , dynamic IERs on a need-to-share basis

Example 2 : UNAMIR HQ – Media



Assisting Mission
To
Monitoring Mission



Conflicted



Coordinated C2

	ADR	PoI	DoI	C2 Tasks	Capabilities
Conflicted	All decision rights remain within each of the entities	very limited, sharply focused <ul style="list-style-type: none"> • Use of public affair staff 	Limited information sharing	---	---
Coordinated	Coordination of efforts	As required: <ul style="list-style-type: none"> • General Dallaire decided to talk himself to all reporters • Anything in the realm of possible was done to permit a maximum of different media outfits and journalists in theatre 	All available and relevant information was made accessible	development of some shared intent	---

Discussion

- Proposed template can be used to identify C2 agility examples but
 - Difficulty to identify the C2 approach used
 - Nuances between C2 approaches : ADR, PoI, DoI vs C2 Tasks / Capabilities
 - Shared Understanding vs Right Understanding
 - Difficulty to identify changes of circumstances
 - Different domain (Physical or not)
 - An Event may be required to notify the change of circumstances:
 - Ex. a confirmation that the situation will not be solved or will deteriorate if no action is being made
 - Difficulty to identify satisfactory state of acceptable level of performance
 - Related to the achievement of some collective intent vs unity of command
 - Difficulty to identify acceptable time of response
 - Did not consider handling multiple C2 approaches at the same time
- Is the satisfactory state is due to the change of C2 or something else?
- Agile C2 is an enabler to mission success
 - Agile C2 does not guarantee mission success
 - UNAMIR has been considered as a mission failure by his Commander as well as others organization such as Human Rights.

Findings

- Effective command under such complex and time constraints conditions requires leaders to maintain the intent of the mission and keep a view of the full breadth of the peace agreement, all while dealing with extremely uncertain and fluid circumstances
- Lack of information sharing led to erroneous situation awareness which put UNAMIR in a situation where he was not really able to cope with the overall situation:
 - General Dallaire was unaware of an existing report about the situation in Rwanda from Special Rapporteur of the Commission on Human Rights. This led to an erroneous situation analysis of the situation. Initial mission's mandate was based on an analysis of the peace process which proved erroneous
- Lack of analytical capacity led to erroneous situation awareness which affected the capacity of UNAMIR to anticipate correctly the future:
 - The reconnaissance mission lacked the necessary political competence to make a correct in-depth analysis of the political situation and the underlying realities between the ex-belligerents of Arusha Peace Agreement
 - The Headquarters analysis made of General Dallaire's cable containing information indicating the existence of a plan to exterminate the Tutsi shows an institutional weakness in the analytical capacity of the United Nations
- The capacity to accept risk (ex. Ability to cope with casualties) is key to be able to go outside one's zone of comfort. In Ex.2, even if there were risk to have the media representatives on the theatre, General Dallaire accepted that risk

Further Investigations needed

- Disablers of agility:
 - Sharing inappropriate information;
 - Bad analytical capacity at all levels;
 - Bad situation awareness;
 - Bad risk assessment;
 - Limited capacity to accept risk (to cope with casualties);
 - Distributed or change of decision rights lacking unity of command;
 - Lack of unity amongst actors;
 - No clear communication process amongst actors (signification of no reply);
 - No robust tactical communications;
 - No real-time situation awareness;
 - No continual validation of the mission mandate;
 - No ability to deal with extremely uncertain and fluid circumstances;
 - No trust between the entities of the collective;
 - No accountability;
 - No military cohesion;
 - No communication;
 - No commitment;
 - No discipline.

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