

18th ICCRTS

**INTERAGENCY COMMAND AND CONTROL APPROACHES IN AMAZON ENVIRONMENT TO INCLUDE, TRUST, CULTURAL AND PERSONAL RELATIONSHIP INTO A C2 MODEL**

Topic 9: Military and Civil-Military Operations [Pri]

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**ABSTRACT**

This article presents an approach to modeling and to guiding an interagency command and control architecture based on institutional relationship among several entities. The model suggests that the level of cultural and personal trust is an important issue in the Brazilian interagency environment, so that, it is proposed to be applied during the 2014 Soccer World Cup games to be held in Manaus-AM, with the of Amazon environment. Initially, the broad area characterization of Amazon interagency environment is described, which is important to contextualize the local cultural interagency C2 approaches. Thus the personal connections importance inside command and control configuration is presented to show how personal and institutional trust and reliability evaluation plays a great role in this kind of operations. In the second part, it is discussed some other variables that can be included in the proposed model: such as environment, institutional needs, cooperation and intelligence connections. At the end, the improved C2 architecture is presented, showing how this new approach can provide cope with confidence in an interagency operation.

**Keywords:** Capacity Building, cultural intelligence, C2 Approach, Shared Awareness, Interagency military operations.

## **INTRODUCTION**

The Brazilian Amazon has more than 5.5 Mi Km<sup>2</sup> covered by a tropical broadleaf forest. There are less than 15,000 km of roads, mostly unpaved. Cities are sparse and most of the transportation has to be done on 30,000 km of navigable waterways. There are seven countries bordering Brazil in the Amazon region, with a total more than 11,100 km of borders.

The difficulty of logistics and communications in Amazon area is huge, there is little infrastructure in the place and the distances it is more than 1500 km away from the major cities. The Brazilian population that leaves “around rivers” area is, mostly, low-income and lives by fishing for survival. There are several areas of environmental conservation and indi-genous reserves, which cover about 40% of the Amazon territory. The presence of government institutions in Amazon area are restricted to the capital, what leaves the borders with an insufficient personnel to perform the roles of supervision, given the logistical difficulties to access these sites.

The Brazilian Armed Forces are deployed along the Amazon border with the mission to defend the homeland from external threats and to collaborate with the maintenance of law and order supporting the federal institutions responsible for that task. There are more than 27,000 soldiers of the three Brazilian armed forces distributed in strategic positions in Amazon frontier. There are special frontier platoons placed in many remote places, commanded by young Brazilians who daily meet the arduous task of overseeing and save the Country.

However, the conditions of Command and Control inside the area are extremely harsh.

There is a great lack of resources and communications infrastructure in a hard, hot and humidity climate. Add to these facts, there are differences of culture and hierarchy in the government agencies and non-governmental organizations that work in the area for surveillance, humanitarian assistance, anthropological studies, installation of basic infrastructure of urbanity, services, and many others purposes. As a result, several cultural barriers affect the development of an effective Command and Control of local and global operations.

Thus, military or interagency operations conducted in the Brazilian Amazon are of such special features that there is little literature on the subject.

This paper aims to present models of Command and Control in the Amazon in the XX and XXI centuries, emphasizing the influence of culture and knowledge of the use of trust as the key to the effectiveness of interagency operations in that environment.

## **METHODOLOGY**

The analysis was performed with the theoretical expository and argumentative discourse on the subject. The target population studied was constituted of a random selection of a 20 civilian and military (specialists), college-educated, who acted in interagency operations between from 2010 to 2012.

The research method was unstructured interview. Data collection was performed by complementary observations of relationships among the agencies participating in interagency operations in the Amazon during the period considered, and finally, it was collected statistics about the results of

the open Operation Agata I, held in August 2011. Data analysis was performed by means of discourse analysis and application of collective correlation coefficient obtained statistical data.

## DISCUSSION

The main problems faced in the Amazon today are environmental crimes, such as deforestation and illegal mining, the "land grabbing", lack of formal employment generating income for the state, lack of access information, lack of adequate social infrastructure (education, sanitation, transportation, communication, etc.) and lack of presence of the regulatory state (justice, enforcement of conservation of the environment, control of indigenous lands, etc.).

The main agencies responsible for maintaining law and order necessary for the stability of the state and its responsibilities are:

**Department of Justice** - responsible for ruling on the merits of the litigation issues that occur in society;

– Federal Police (PF) - Investigates criminal offenses against the political and social order, prevent and suppress trafficking in narcotics, drugs and contraband, and it also performs the duties of police maritime, airport, border and, uniquely, the State Judicial. Its **hierarchy is horizontal**, with the supervisory power of centralized command, in general, in each state. It has few agents and small capillary network of intelligence operations in the Amazon area (AOA).

– Federal Revenue Service (RFB) - responsible for planning and supervision concerning Customs. It also acts against smuggling and illicit trafficking of narcotics

and related drugs, and money laundering, supporting the efforts of the State. Its **hierarchy is horizontal** and its **Intelligence is centralized** (low capillarity). Its agents are concentrated in the capital city.

– National Public Security Force (FNSP) - supports the states of the federation when local police alone can not respond to the challenge of suppressing conflicts in emergency cases. Its **hierarchy is vertical**, but its members are grouped temporarily, with police from several states.

– National Indian Foundation (FUNAI) - Is responsible for managing the Brazilian indigenous policies and defend the interests of Indians in the demarcated indigenous lands. It has **horizontal hierarchy** and a little capillarity and effective personnel to carry out its functions in AOA.

**Brazilian Intelligence Agency (ABIN)** - Develops and implements the activity of State Intelligence. Information sharing is determined by senior management. It has a **specific hierarchy** and large capillary network of information by integrating the intelligence of all federal government agencies, including the Armed Forces.

**Brazilian Institute of Environment (IBAMA)** - Operates in the country with significant environmental police; performs environmental actions that are part of national policies; oversees authorizes, controls and monitors the use of natural resources. It has **horizontal hierarchy** and free action for its the field agents. It has little capillarity and a concentrated presence of its agents in the state capitals of the Brazilian Amazon.

**Department of Defense (MD)** - establishes policies related to the defense and the security of the country.

- Armed Forces (AF) - are comprised of the Navy, the Army and the Air Force, under the supreme authority of the President, and they are intended to defend the homeland, guarantee the constitutional powers, law and order. Its **hierarchy is vertical** and the information sharing is at local level. It also has great capillarity of intelligence agents in the considered area.

- Amazon Protection System (SIPAM) - generate and integrate data and information relating to the protection of the Amazon (local deforestation, illegal traffic, increasing unauthorized local mining, and other environmental ilicits). Allows the planning and control of operations by Department of Defense, Justice, and others. It is constituted by **Vertical hierarchy** and its staff is concentrated in the capital city, with little capillarity (in personnel). But it has satellites data and radar coverage of the entire AOA.

Thus, these government agencies with different hierarchies, purpose and organizational cultures are gathered during interagency operations to protect the Brazilian border in the AOA. These operations always try to use the Effects-Based Operations (EBO) concept, described by DAVIS, for planning and conduct the actions in combining actions to achieve a particular effect. But the differences and, specifically, hierarchical characteristics of the command chain among them, makes the interpersonal trust among the officers play a greater role than a simple institutional relationship.

### **AMAZON BRAZILIAN CULTURE CONSIDERATIONS**

The People miscegenation occurred, since the roots of Brazil. That fact gives to the Brazilian people a set of special features,

such as solidarity, difficulty with subordination to authority or hierarchy.

According to HOLANDA, the Brazilian is a "cordial man". There is a duality in the concept of warmth. The most actions of the Brazilian people are directed by the heart than by reason, and they are passionate and partial in their decision making. That's the major relationship rule, transforming hard relations to kind and easy. (HOLANDA, 1971)

For these reasons, he considers that Brazilians can not adapt themselves to formal relations with the State, they seek, by their very nature, to strengthen intimacy and emotional personal level.

Darcy Ribeiro, a Brazilian anthropologist, emphasizes that man do not search affinities for function or position held, but for the origins of his primary group. Brazilians of all layers of the society, especially the poorest, are supportive to their "peers" and sometimes intolerants of those whom have more possessions. (RIBEIRO, 1995)

The society, from the perspective of the Brazilian, is closely linked to its affective sphere and it is not governed by state conventions of formal relations or functional. It's RIBEIRO's approach, the stratification of classes is the breakdown factor of Brazilian society.

The lower social level is more united than other classes in Brazil. As said by RIBEIRO, "on the down side, social stratification, unifies and articulates the immense masses predominantly dark".

Brazilians are, today, one of the most linguistically homogeneous, culturally and socially integrated people in the Earth. it

reflects the admixture that occurred in over 500 years of history.

"Brazilians speak the same language without dialects, do not harbor any contingent that claims of autonomy, and are not clinged the any past, being opener to the future."

In this passage, Darcy Ribeiro summarizes the "Brazilian way", claiming that the Brazilian is the essence of the miscegenation and that it condones to the homogeneity of the people, leaving him with an open mind to the uncertainties of the future.

Gilberto Freyre says in his book "*Casa Grande and Senzala(1933)*", that the economic poverty is more than compensated by a more human system of personal relationships. (FREYRE, 1933)

Following DAMATTA studies, it is believed that the Brazilian has a "dual" behavior. In one side Brazilian people has one position at home with friends, relatives and his close family unit, and in another side on the streets, towards society, bureaucracy, legal system and the law - they simply coexist in a rapidly changing society, deeply marked by transitions balanced and negotiated.

[...] In fact, there is a linear effect on the streets, a cyclical weather prevailing at home and eternal time from another world. (DAMATTA, 1997, p. 37)

For DAMATTA, the Brazilian is also dual and hierarchical. People like to give orders and having authority over others. Damatta also warns that society is a living thing that moves and it has evolved and changed, trying to adapt itself to the world dictatorship of the "legality" and "political correctness." (DAMATTA, 1997)

Furthermore, the Brazilian state government are require to take care the public " things", according to the data shown in Table 1.

According to research conducted by ALMEIDA, in Brazil when the government takes care of what is public, and the society recognaizes it, people tend to support it easily.

**Table 1 – Public responsibility collaboration**

	People should collaborate with government when it doesn't take care of public things very well (%)	People have always collaborate with government to take care the public things very well (%)
Illiterate	41	59
until 5 <sup>a</sup> fundamental school	34	66
fundamental school	36	64
high school	46	54
College and superior	58	42

Source: adapted from ALMEIDA (2007, p. 140)

The family is another important vector in brazillian ethics. Education passes from father to son, gets internalized in the family members, as well as their beliefs and attitudes. This fact is confirmed by the formation of ethics in Brazil, where the most reliable social group is the family, according to data presented in Table 2.

**Table 2 – Brazilian trust level**

	Brazilian trust level: (%)				
	Family	Friend s	Neighborhoods	Work colleagues	Unknown people
untrust	16	70	77	70	85
trust	84	30	23	30	15

Source: adapted from ALMEIDA (2007, p. 115)

It is known that the Brazilian State is responsible for containing crime and bring a solution to criminality. The use of Armed Forces in supporting Public Security Forces or humanitarian actions has wide acceptance and adoption, which leads it to 66% of

credibility of the people (ALMEIDA, 2007). Finally, the Brazilian culture is firmly based on trust and close relationship, for this reason the C2 model is built not only on intitutional liasons but also it is influenciated by personal relationship among the officers from the differents agencies involved in the misson.

## THE TRADITIONAL BRAZILIAN C2 MODEL

The driving model of interagency operations is hierarchical, as in Figure 1.

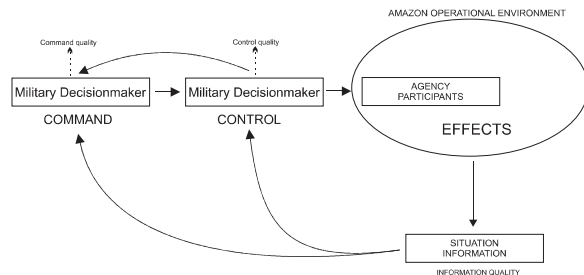


Figure 1: Model C2 century  
Source: Adapted from Alberts & Hayes, 1942

In Figure 1, it is demonstrated how military institutions are used to process command and control of operations in interagency situation. It can be seen, that there is a trend to centralize informations, following the military hierarchical way of thinking.

As it shown, the operations are conducted by a single military command, centralized and hierarchical, where information flowed primarily from military intelligence for the other systems counterparts. The quality and the peed of interchange sensitive topics are restricted to the command chain involved and the links depends on the personal relationship among the top rank officers from the different agencies.

The relationships among agencies are made according to the responsibilities of each, with little or no focus on the result of a

common goal. The Common Operational Picture sometimes tends to be unadapted or with no sufficient speed, reason why the common understanding of the mission is difficult to flow for every level of the organization. For this reason, there are no software solution to cope with this lack of integrated vision of the problem, so the interoperability depends more on the Command and Control “peopleware” than C2 softwares, used to be designed from the point of view of each Institution.

In fact, all problems are solved from the perspective of each institution, without the worry about combined efforts. The situation was static and there are no prospects for changing the pictures. There were difficulty and slowness to share information among agencies. That’s the close vision frame interagency command and control.

However, it is necessary to emphasize that the organizational information and the Observe, Decide and Act cycle (ODA cycle) of each agency flowed seamlessly, allowing effectiveness to the C2 interagency model. That the way to enable satisfactorily fulfillment of missions, under the own Institutional different points of view.

However, several opportunities of observing an overview of the problem to be attacked were felt at all levels of implementation.

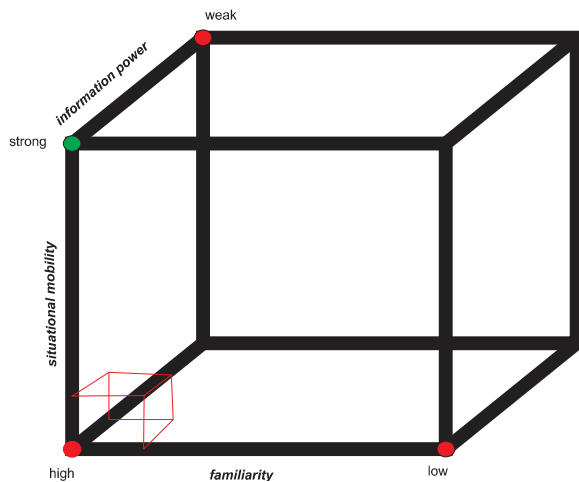


Figure 2: Model C2 – XX century  
Source: Adapted from Alberts & Hayes, 1942.

In Figure 2, it can be understood that the events in the Amazon did not have much prospect of change, the information produced by the Military Intelligence were consistent and level of familiarity was high, there was more unknown facts than known aspects in mission accomplishment.

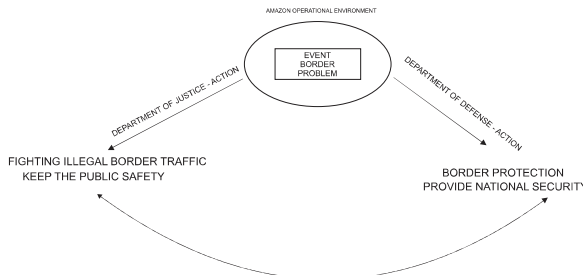


Figure 3: Model of action interagency Sec XX  
Source: Author

### THE C2 AMAZON INTERAGENCY CONTEXT INSIDE THE XXI CENTURY

The Brazilian Politics Borders were launched in 2011 by the government within “The Border Strategic Plan”. It intends to increase the presence of the Brazil’s border and crack down the transnational and environmental crimes.

The execution of this plan is coordinated by the Vice President of the Republic and it is composed of punctual interagency operations, coordinated by the Department of Defense (operation AGATA); and the permanent operations are coordinated by the Department of Justice (operation SENTINELA).

The interagency operation AGATA, coordinated by the Brazilian Army, has the participation of other Brazilian Armed Forces and is supported by other federal and state agencies such as: Federal Police (PF), the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA), the Federal Revenue Service (SRF), the Amazon Protection System (SIPAM), the National Security Force (NSF), the Brazilian Intelligence Agency (ABIN), public security organisms of the state of Amazonas, among others, to combat cross-border crime and environmental crimes in the border region of the Amazon.

### THE PROPOSED C2 MODEL FOR THE XXI CENTURY

It is proposed a model to improve the interagencies operations, in order to cope with the lack of trust and to improve the information exchange speed. First of all the new relations and the exchange of information between AGATA and SENTINELA operations were evaluated, then the several Comand and Control approaches introduced by HAYES were studied in order to identify the best model approaches to be used in the Brazilian reality.

The C2 model used in Amazon Interagency operations is a **collaborative model**, considering the job definitions provided by the Border Strategic Plan. In this sense, the operations were defined clarifying a set of



highest level decision-making, the task posed by each Department within a single national goal: the reduction of transnational and environmental crimes.

This defined goal could be seen for every agency as the general effect desired by the strategic plan, making the planning process very close to the Effects-Based Operations (EBO) concept from DAVIS. Thus, the national institutions have adopted a new stance facing the problem.

However, this new model put some hope in solving the interagency Amazon C2 challenge, because the mission objective and intermediated steps were done in collaborative way, with each partner doing its job in its competence sphere .

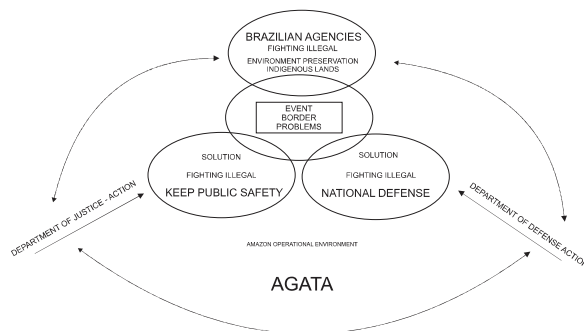


Figure 4: Model of interagency action (AGATA) - XXI century  
Source: Author

It's the strategy of rapprochement among all institutional partners. The relationship between the military and the Agencies are no longer hierarchical. The chain of command is no more structured by imposition but by the arrest of knowledge and information.

The common problem to be solved is “How to fight illegal on the border together to be effective?”

### Trust and Information Sharing

The situational changes and fluidity of Amazonian operating environment, with all the difficulties mentioned above, created a common challenge that had required a new the approach of the institutions.

The average Brazilian is (a human being) suspicious by nature. As shown above, he relies more on his family than in his coworkers. This fact becomes relevant when aiming “confidence” as became the basis of the C2 model used to solve the challenges of interagency operations in the Amazon.

That “suspicious behavior” were shared among the organizational culture of intelligence agencies in Brazil. Sensitive information is exchanged whenever required but not available "to push" as proposed by HAYES.

But in the process of planning the operation AGATA there was an approximation of the highest authorities. This Trust approach was provided by the highest level of their administrations initiating a process of building mutual knowledge and trust for the exchange of sensitive information between them.

By the way, that approach was adopted by the lowest level, where they did their work as in family relationship, the information flowed naturally. The use of the chain of command, hierarchical or not, allows each agency to exchange information, observing the situation “common picture”.

Despite of the Armed Forces, particularly the Army, continues to be responsible for conducting operations, the coordination of intelligence passed to an external body, the ABIN.

Thus, there are two major changes in the posture: the information was now exchanged

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among all agencies, through the “information to push” way, according to HAYES theory, and the Army took a collaborative approach, identifying tasks where each agency would be more important and allowing planning process to be done and not imposed as in the past.

This collaborative approach has increased the degree of trust among the participants, as all has become part of the solution and not a merely tool to accomplish a specific task.

Another part of planning/execution that was affected, was the perception that a common procedures were required. The standardization of interagency procedures for each situation, rather than to each agency allowed to building and jointing the bonds of understanding among them.

Despite the lack of a common technological platform to share information, the processes used worked well and they supplemented that gap.

However, it must be noted that this specific approach was only possible because of the nature of the Brazilian culture. The approach of the agents of the lowest classes, their friendship, mutual respect and confidence increased interinstitutionality as a whole, leading the collaborative process among agencies.

It was observed that when an agency failed, picking out an unknown agent to participate in a decisive process, this agent also failed in achieving effectiveness in his work, what reduced the effectiveness of the whole mission.

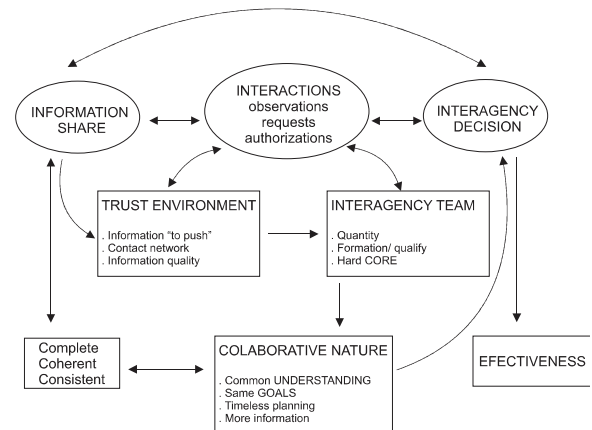


Figure 4: Model C2 XXI century

Source: Adapted from “influence model” Alberts & Hayes, 1942.

The focus of the solution was, therefore, to drive the process, with a in unique understanding of the mission and collaboration of all organism through mutual understanding, confidence and well-defined tasks.

Finally, the “Confidence” allows an exchange of information with greater speed and quality. This allows the common understanding of the goals to be met. Therefore the construction of human relations, based on brazilian cultural traits is the key to the push the interagency process used in the Amazon.

## RESULTS

From the surveys, we could imply that the changes in the *modus operandi* of interagency operations in the Amazon have produced results never achieved before. The causes of this increase in effectiveness are directly related to the C2 model adopted.

The command, while remaining centralized, enables the participation of the entire senior? management of the agencies in the decision making. Knowledge, mutual respect and division of tasks aimed at fulfilling the same

goal for all agencies and the common understanding of the mission, allow the command to be exercised in a collaborative way, where the control can be exercised by expressing the results as it will be seen in Figure 5.

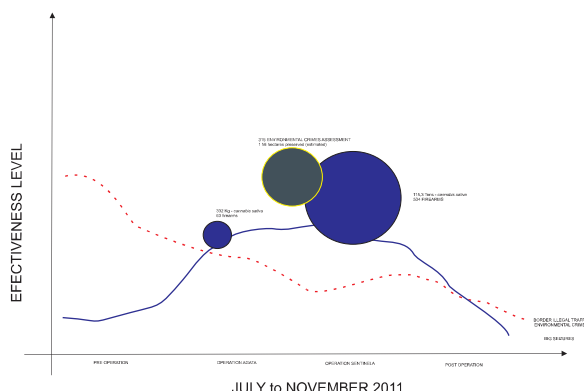


Figure 5: Effectiveness of actions  
Source: The Author

Therefore, the collaborative model presented shows that the operation AGATA (temporary), coordinated by the Department of Defense achieved a crime decreases in general effect. The number of seizures made increased in the interagency environment, also allowing the intelligence agencies to collect information provided by the Department of Justice, what in operation SENTINELA (permanent) can fulfill better the government constitutional tasks to combat transnational crimes.

Another effect was the sense that the joint efforts increases the effectiveness against environmental crimes, with the existence of big and permanent operations, major results appeared during the execution of the operation AGATA, coordinated by the Department of Defense, what validates the model presented here.

## CONCLUSION

It follows from the above showed models that the information exchange in Brazilian Amazon environment is strongly affected by the interpersonal relationship among the people involved in interagency command and control operations. In this sense, the trust and mutual respect play a big role in the effectiveness of the mission.

The Strategic Plans are important to give the legitimacy and to define the desired effect in the interagency operations, but they are not enough. The trust among the involved agencies, is affected by the personal relationship, and command and control are effective and work well only because of the cultural specificities of the Brazilian.

It is necessary a strong commitment of those responsible for the interagency operations to maintain and foster mutual knowledge among the agents that work together in that environment.

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