Command and Control Application

Vanguard Research, Inc.

Project Introduction

- Command and Control Application
- Participants:
  - Preston Marshall
  - Jack Kantak
  - Young-ki Hwang
  - Yoonhee Kim

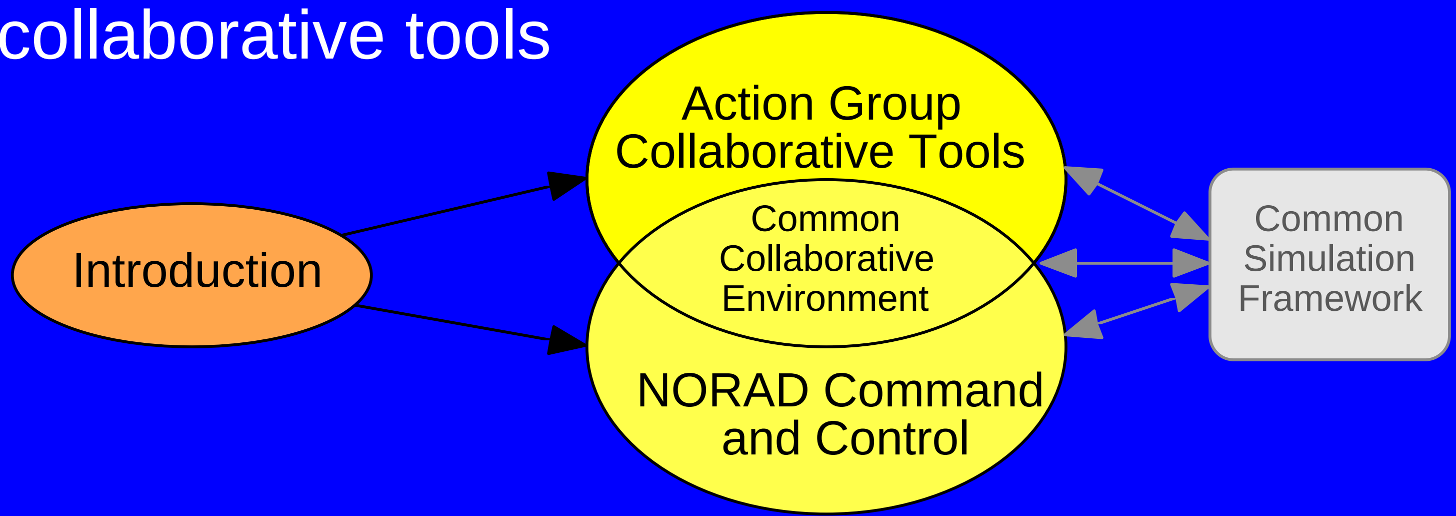
Develop a prototype Command and Control Application using Web-based tools and Project Applications and Technologies

Status Overview

- Scenario Development
  - Initial scenario set up pages and multimedia completed
  - In process of being linked into the Control Application for automatic sequencing
- Command and Control Application
  - NPAC Control Application (CA) framework now available
  - GIS with imagery integrated in Command Center
  - Converting object model to the CA framework
  - Converting CA window to integrate with Command Center application, and provide collaborative tools integrated into command center
  - Developing Simulation
  - Converting Applets to CA framework

Scenario Structure

- C2 Demonstration now partitioned into two tool sets.
  - Open, Collaborative environment for preplanning, research and emergency response.
  - Command and control simulation based on current command center technology, enhanced with collaborative tools



Scenario Development

- Initial scenario set-up completed
- Set of simulated briefings, teleconferences or video teleconferences
  - Intelligence Report about immediate, emergent threat
  - Technical Report outlining specifics of threat and requirements for planning.
  - Tasking to structure the demonstration activity

Entry into the C2 Application

- Simulated Action Group called to address threat emergency
- Remote participants networked into integral effort using web-based tools

Demonstration Initiation

You have been asked to participate in this emergency planning exercise because of your in-depth experience in the threat that has just been confirmed. In the next few minutes you will receive briefing and background material on this threat. After this introduction is over, I want you to describe how we plan to address this emergent problem, and for an Action Group to develop response planning that can be executed by both our military and civil emergency forces. It is critical that we address this situation in with an integrated plan that represents the results of your collaboration. An intelligence briefing follows this introduction. Depending on how you are participating in this conference, you can have video teleconferencing, an audio telcon, or can read the fax copy we have sent you. The briefing consist s of both Intelligence and Technical presentations.

- Intelligence Briefing
  - View Video Briefing
  - Listen to Audio Briefing
  - View fax of the Briefing
- Technical Briefing
  - View Video Briefing
  - Listen to Audio Briefing
  - View fax of the Briefing

We will now proceed to form the action group

Go to Next Step

Return to First Page

Scenario Overview - Intelligence Situation

- Simulated Intelligence report
- States emergence of threat
- Establishes the context for all remaining activity

CLASSIFIED

TO: Members of the Concept Action Group

FROM: Director, Intelligence

Subject: Emergence of Immediate Terrorist State Threat to North America

This memorandum outlines recent intelligence information that has been made available to this organization.

A terrorist state, supported by a know multi-state terrorist group has obtained, and is planning to use, a crude missile capability. This capability consists of a turbo-prop airliner (a Beech 1900 commuter plane) with Global Positioning System (GPS) navigation and autopilot. With the fuel it has been modified to carry, it is capable of launching from the middle east and reaching North America.

Our information is that the aircraft will carry weapons of mass destruction, of either a chemical or biological nature. We have confirmed that they have probably obtained both types, and have the willingness to use them.

Their intent is to demonstrate that they can hold the entire population of both the U.S. and Canada at risk, and to retaliate for perceived interference with allied ethnic interests in the Balkans. We believe that they intend to attack a target in North Western New York, to threaten Canada, and target deployment support resources at Fort Drum.

It is important that all involved understand that it is possible that interception of this aircraft will have a significant impact on the surrounding populations. The agents present in this weapon may not be destroyed in an interception, and could be even more widely distributed.

Of course we will pass on any additional information we obtain to the Group.

Scenario Overview - Technical Briefing

- Establishes the technical issues to be addressed in planning process.
- Problem stated in manner that requires multi-disciplainary, collaborative approach
- Understanding key to performing tasks, therefore visualization is critical

CLASSIFIED

TO: Members of the Concept Action Group

FROM: Director, Intelligence

Subject: Emergence of Immediate Terrorist State Threat to North America

This memorandum outlines recent intelligence information that has been made available to this organization.

A terrorist state, supported by a know multi-state terrorist group has obtained, and is planning to use, a crude missile capability. This capability consists of a turbo-prop airliner (a Beech 1900 commuter plane) with Global Positioning System (GPS) navigation and autopilot. With the fuel it has been modified to carry, it is capable of launching from the middle east and reaching North America.

Our information is that the aircraft will carry weapons of mass destruction, of either a chemical or biological nature. We have confirmed that they have probably obtained both types, and have the willingness to use them.

Their intent is to demonstrate that they can hold the entire population of both the U.S. and Canada at risk, and to retaliate for perceived interference with allied ethnic interests in the Balkans. We believe that they intend to attack a target in North Western New York, to threaten Canada, and target deployment support resources at Fort Drum.

It is important that all involved understand that it is possible that interception of this aircraft will have a significant impact on the surrounding populations. The agents present in this weapon may not be destroyed in an interception, and could be even more widely distributed.

Of course we will pass on any additional information we obtain to the Group.

Scenario Overview - Team Tasking

- Sets up the team tasking
- Sets specific goals for the next period of the demonstration.
- Stresses collaborative requirements explicitly
- Points to a set of resources that have been prepositioned to support the team's interaction.

CLASSIFIED

TO: Members of the Concept Action Group

FROM: Source Classified

Subject: Response Strategy to Address the Emergence of Immediate Terrorist State Threat to North America.

This memorandum outlines your responsibilities as a member of the Response Strategy Action Group.

Your group must develop a strategy that can drive the actions that U.S. and Canadian civil and military leadership must take to minimize the damage that a cruise missile could inflict on the two nations. The team you are on includes both military and civil organization representation so that we can best integrate a national response.

In performing this task, It is important that you to maintain liaison with the North American Aerospace Defense Command, which is responsible for the military aspect of this mission, as well as civil authorities in the effected regions. It is important that we have a collaborative solution that all participants are ready to perform.

Of course we will pass on any additional information we obtain to your group.

CLASSIFIED

C2 Demonstration Status

- Users will have choice of running as a Command Center or as a collaborative terminal (the NPAC Control Application).
- Both options support similar tools
  - Difference is in flexibility of open environment vs. the fixed Command Center framework
- After detection, some users will be able to switch to the Command Center framework, and then back to the open CA.

C2 Simulation

- Converted our object model to run within the CA framework.
- Collaborative tools now all accessible through C2 demo.
- Simulation internal architecture now matches the collaborative architecture.
- Event classes now provide for initiation of multi-media events.

Current Effort

- Merging the C2 simulation and CA application to form a hybrid application.
- Rebuilding frames to interact via the collaborative server.
- Structuring simulation to execute as one of the collaborative applications, rather than in individual workstations.

Remaining effort is primarily technical, not conceptual