# Scenario 2 – Border Tensions and Terrorism

Geopolitical tensions are growing. Many countries are struggling to adapt to rapid changes being driven by globalization and the realignment of traditional political and economic relationships. Orange and Blue have been hit particularly hard by the changes, which have caused political and economic instability in both countries and reopened scars of past conflict between them. Hardline governments have risen to power in both countries on promises to restore each to their former glory and to right historical wrongs.

On November 1, Orange is struck by the largest terrorist attack in its recent memory in a province bordering Blue. Suicide bombers detonate multiple devices inside a packed train station in the largest city of the province, killing dozens and injuring hundreds.

On November 3, Orange media leaks that the preliminary investigation has linked the attack to extremists in Blue. Despite Blue's denial of any official involvement, public outrage in Orange forces action. A state of martial law is declared in the province, and Orange military forces are mobilized to secure the border between Blue and Orange. Blue expresses concern that the mobilization seems excessive. Blue media pundits warn that the build-up might be in preparation for a military attack by Orange.

On November 6, Orange media broadcasts a report that claims to show evidence linking the terror attack to Blue intelligence services. Although Blue officially denies the link, the report has a strong influence on the Orange public, who demand action from their government.

On November 8, a Blue fighter aircraft on patrol shoots down a Yellow helicopter within Blue territory near the border with Orange, killing all on board. Blue states that the helicopter violated its airspace. Blue media announces that the helicopter was carrying an Orange special forces team and that the team was on a covert mission to infiltrate Blue. The helicopter was launched from a joint Orange-Yellow base located in Orange's territory near the border with Blue. Pundits in Blue speculate that Orange and the Yellow are preparing to invade Blue.

Blue places its armed forces on their highest alert and mobilizes multiple armored and mechanized divisions to the border with Orange, along with fighter patrols. Blue publicly vows to defend itself against all threats.

# Yellow Team - Scenario 2

#### **OBJECTIVE**

Yellow's primary objectives are to deter a ground invasion of Orange by Blue and to ensure the integrity of Yellow's nuclear deterrent, including the ability to detect and respond to a nuclear attack using space-based missile warning and protected communications.

### PRIVATE INFORMATION

Yellow has been in discussions with Orange on possible responses to an attack by Blue, as well as options for retaliation or a pre-emptive attack to blunt a possible Blue offensive.

The Yellow helicopter was carrying an Orange special forces team to conduct a raid on the extremist border enclave in Blue from which the terrorists originated. The helicopter was supposed to be stealthy against radar detection by Blue but was detected by Red, which provided the tracking data to Blue.

In response to the deepening crisis, Yellow has made slight alterations to the orbit of several of its intelligence satellites to increase ISR of Blue forces in the crisis region.

Yellow intelligence services are moderately certain that Blue intelligence was at least aware of the terror attack beforehand, if not complicit in it. Intelligence sources show there is a high level of activity among Blue war planners and indicate potential preparations for a pre-emptive strike on Yellow space forces, which would be consistent with Blue doctrine of denying adversaries the use of space.

On November 8, Yellow space surveillance capabilities detected a change in the orbital trajectory of three small objects in the GEO belt, which had originally been cataloged as debris from a Blue space launch five years ago. The new trajectories have the three objects drifting around the GEO belt towards the region over the crisis area between Blue and Orange.

A few hours ago, the first of the small satellites was predicted to arrive at the location of one of Yellow's GEO missile warning satellites, which provides warning of missile launches from the crisis region as well as battlefield intelligence. Around the same time, the Yellow missile warning satellite began experiencing interference with its command and control channel, resulting in interruptions to its health and status reports, as well as interfering with Yellow's ability to send commands to the satellite.

Yellow does not have sufficient space situational awareness coverage over the conflict area to independently confirm, but Red does have a ground telescope with good visibility.

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ISR satellites show that Blue's mobilization includes increased readiness of their ASAT capabilities. At least six of Blue's mobile direct ascent ASAT launchers have left their bases and their current whereabouts are unknown. Additionally, Blue's airborne laser dazzler platform is making daily patrols in the region bordering Orange. Blue has also deployed mobile PNT jammers to the border region.

# Blue Team - Scenario 2

#### **OBJECTIVE**

Blue's primary objective is to deter a ground invasion or violation of Blue's territory by Orange or Yellow.

#### PRIVATE INFORMATION

An investigation has revealed that the terror attack was supported by a small rogue element within Blue's intelligence services, but there was not broad support within Blue's government.

The Yellow helicopter was shot down because it crossed the border into Blue airspace and was believed to be carrying a full Orange commando team. The helicopter was detected by a sophisticated Red civil air traffic tracking radar, after which Red warned Blue about the unknown aircraft.

As part of the mobilization, Blue has dispersed six mobile direct ascent ASAT systems, four ground-based mobile PNT jammers, and began regular flights of an airborne laser dazzler platform, all within Blue territory near the border region.

Several days ago, Blue activated three small inspection satellites in the GEO region and tasked them to move toward Yellow's GEO satellites over the crisis region to determine the ability of Yellow to use those satellites to support a potential conventional conflict on the ground. Blue has not yet activated its co-orbital ASATs hidden in the GEO belt.

One of the three inspection satellites arrived at the location of a suspected Yellow satellite providing missile warning and intelligence to the crisis area. Blue instructed its satellite to alter its trajectory to conduct rendezvous and proximity operations (RPO) of the Yellow missile warning satellite in order to assess its capabilities and functions. The other two Blue satellites continued drifting toward other Yellow satellites. Shortly after beginning its inspections, the Blue satellite conducting RPO near the Yellow satellite began experiencing interference with its command and control channel. This has interrupted its health and status reports, as well as Blue's ability to send commands.

Intelligence sources show a high level of activity among Yellow war planners and indicate potential preparations for a pre-emptive strike on critical command and control and air defense nodes that would be consistent with Yellow doctrine of seizing the initiative and dealing a decisive blow early in a campaign.

Yellow has altered the orbits of its ISR satellites to optimize collection over Blue territory. The satellites provide daily coverage of the border region and previously proved successful at identifying targets that were destroyed by PNT-guided munitions. Yellow will likely have fully mapped Blue's deployed forces and C2 architecture in a few days.

Blue has requested exclusive access to Red commercial ISR satellites over the conflict region, but has not yet received a response.

# Orange Team - Scenario 2

### **OBJECTIVE**

Orange's primary objective is to deter a ground invasion by Blue. Orange's secondary objective is to bring the perpetrators of the terror attack to justice and eliminate the terrorist threat.

### PRIVATE INFORMATION

The Yellow helicopter was carrying an Orange special forces team to conduct a raid on the extremist border enclave in Blue from which the terrorists originated, with orders to capture or kill those responsible for the terror attack.

Orange has been in contact with Yellow to discuss possible responses to an attack by Blue, as well as options for retaliation or a pre-emptive attack to blunt the offensive.

Yellow intelligence has alerted Orange that three small Blue satellites, suspected to be co-orbital ASATs, are drifting through the GEO belt towards important Yellow satellites, including ones that provide tactical warning of missile launches and battlefield intelligence of the border region.

Orange has requested exclusive access to Red commercial ISR satellites over the conflict region, but has not yet received a response.

# Red Team - Scenario 2

#### **OBJECTIVE**

Red's primary objective is to deter an attack on its sovereign territory. Red's secondary objective is to prevent a conflict between Orange and Blue -- its two largest trading partners -- which would threaten political and economic stability in the region.

# PRIVATE INFORMATION

Red has a very sophisticated civil air traffic control radar that detected the Yellow helicopter as it moved across the border. Red alerted Blue that it had detected an unknown aircraft but did not know it was a Yellow/Orange military mission.

Red has a scientific telescope located near the border with Orange and Blue, which provides data to a global tracking network operated by Yellow.

Red's telescope observed one of the three objects alter its trajectory to stay close to one of Yellow's missile warning satellites, while the other two have continued to drift further along the GEO belt.

# **Scenario 2 Summary**

### **Inbrief**

The scenario begins with a terror attack on Orange that was supported by a rogue element in Blue's intelligence services. Media speculation and leaks of possible involvement by Blue intelligence services leads to growing public anger in Orange, prompting an attempt at a covert raid of Blue by Orange and Yellow. However, the aircraft involved in the raid are shot down, leading both sides to mobilize forces along the border and prepare for possible conflict.

As part of the preparations, Blue secretly dispatches three small inspection satellites to drift towards Yellow national security space assets in GEO. As one of them arrives near a Yellow satellite that provides missile warning for both Yellow and Orange, both the Yellow missile warning satellite and the Blue inspector satellite experience interference with their command and control channels (although each is only aware of the interference with their own satellite). Yellow is reliant on a ground telescope located in Red for direct observation of the situation.

Yellow observes Blue mobilizing its mobile direct ascent ASAT launchers and airborne satellite dazzler platforms near the border with Orange. Blue observes a high level of Yellow war planning, including possible preparations for pre-emptive strikes on critical command-and-control nodes, and retasking of space-based ISR assets to increase collection of Blue military targets.

Yellow's primary objectives in the scenario are to deter a ground invasion of Orange by Blue and to ensure the integrity of Yellow's nuclear deterrent, including the ability to detect and respond to a nuclear attack using space-based missile warning and protected communications.

Blue's primary objective is to deter a ground invasion or violation of Blue's territory by Orange or Yellow.

Orange's primary objective is to deter a ground invasion by Blue. Orange's secondary objective is to bring the perpetrators of the terror attack to justice and eliminate the terrorist threat.

Red's primary objective is to deter an attack on its sovereign territory. Red's secondary objective is to prevent a conflict between Orange and Blue -- its two largest trading partners -- which would threaten political and economic stability in the region.

### Move 1

Note: In a change from Scenario 1, Teams were permitted to communicate privately with one another during each move. Actions and public messages may only be submitted at the end of a move.

Orange's goals in Move 1 were to deter Blue, solidify their alliance with Yellow, and deal with public discontent. Blue's goals were simply to de-escalate the situation in the region. Yellow hoped to keep Blue in a box, protect its nuclear C2 assets, and reassure its allies. Red played a smaller role, hoping to deter an attack on its sovereign territory by making themselves more valuable to Yellow and Blue in peacetime than in wartime.

During the Move, all three teams exchanged private messages. Blue sent a private message to both Orange and Yellow that admitted to the terror attack being sponsored by a rogue element in their intelligence services, stated that they had been dealt with, offered compensation, and explained that their increase in alert levels was to offset a potential Orange response. Blue also messaged Red about obtaining exclusive access to Red commercial ISR services. In response, Yellow demanded that Blue end all operations against Yellow satellites, and bring the matter before the International Court of Justice. Red also informed Blue that it was willing to share the commercial ISR data it possessed, but was unable to grant exclusive rights.

Orange messaged Yellow to urge reinforcements of land forces, tanks, and artillery to establish a deterrent to Blue forces, to which Yellow agreed. Orange also requested that Yellow establish a "security zone" around its space assets for self-defense, which Yellow declined.

Red privately messaged Blue and Yellow with the concern that Blue's rendezvous and proximity activities in GEO were escalatory, and offered to provide SSA information to descalate the situation to both sides. Yellow agreed to send a senior delegation to the Red interior, in exchange for access to the SSA information.

At the end of Move 1, Orange increased its alert level, and, jointly with Yellow, deployed additional naval forces to the border region. Orange also released a public statement demanding justice, while stating its intention to refrain from attacks on Blue except in collective self-defense.

Blue raised the alert status of its conventional forces, but not its nuclear forces, and increased tasking of is government and Red commercial ISR assets of Yellow mainland. Blue also moved all of its GEO inspection satellites to a non-threatening distance from Yellow satellites, and released an open letter to Orange proposing a phased, reciprocal stand-down of forces on the border.

Yellow conducted cyber attacks against Blue SSA ground sites and non-nuclear C2 sites. The cyber attacks on Blue SSA were adjudicated as not successful, but were attributed to Yellow. Though the cyber attacks against Blue's non-nuclear C2 were also not successful, this action was not attributed to Yellow. Yellow also released a public message urging all parties to de-escalate.

Red increased its military readiness, and moved military forces closer to its border between Blue and Orange, and publicly stated that the shift was defensive in nature to maintain the integrity of its border sovereignty.

# Move 2

In the beginning of Move 2, several teams exchanged private messages on the possibility of Red observers on the Orange-Blue border to monitor de-escalation. Orange made the original request to Red, which Red, Blue, and Yellow responded favorably to. Blue not only welcomed the idea, but requested that Red also monitor de-escalation against space-based assets. Yellow also suggested information sharing and transparency measures to mitigate any potential attempt by the terrorists to elevate tensions again.

At the end of Move 2, Red took several actions to try and gain greater insight into Blue's decision-making, and to de-escalate the situation. Red deployed border monitors along the Blue-Orange border to establish a demilitarized zone. Red also launched an offensive cyber operation against the Blue government to derive insights on the intentions and relationship of the government to the terror organization. The operation was adjudicated as successful, and confirmed that the attacks were sponsored by a rogue element and not authorized by the Blue government. Red also publicly invited high-level delegations from all parties to attend deescalation discussions.

Both Yellow and Orange elected to perform no actions this move, as they felt that the actions of the other teams were moving in a direction that was consistent with their objectives.

Blue initiated several actions with the goal of deterring Yellow, fracturing the Yellow/Orange alliance, and enhancing its relationship with Red. Blue conducted three simultaneous cyber attacks on military logistics sites in Yellow, adjudicated as successful attacks on Yellow military air refueling, naval port facility, and military logistics inventory system, and none of which were attributed. Blue also began conducting intermittent, random PNT jamming over its own mainland as a deterrent to Yellow/Orange use of precision-guided munitions, and staged a massive rally to demonstrate public support for the Blue government. Blue also publicly proposed a regional economic and security group with Orange and Red to stabilize the region and reduce violent extremism, and publicly called for peace talks.

## Move 3

Although the cyber attacks on Yellow were not attributed, Orange and Yellow assumed they were conducted by Blue. Orange privately suggested to Yellow that they respond with a joint attack on Blue's military satellite command and control ground stations, but Yellow declined for fear of escalating the situation (including Blue potential moving against Yellow satellites in GEO). Simultaneously, Blue blamed Red for the cyber attacks which Blue had initiated successfully, in an attempt to sow confusion (which was successful to some degree).

At the end of Move 3, Yellow did not take any actions as it felt it was still accomplishing its objectives.

Space Crisis Dynamics and Uncertainty TTX Scenario 2 Results

Orange, contrary to Yellow's request, jammed the SATCOM downlinks in the vicinity of Blue SSA ground stations and conducted special forces raids to destroy the ground stations in order to cripple Blue's ability to command and control its inspection satellites. The jamming and raids were adjudicated as successful, and attributed to Orange. Orange publicly invited Blue to discuss Blue's proposal for a regional economic and security group, while privately expressing to Yellow that it would never accept such a group that excluded Yellow.

Blue took several steps designed to deter a potential Yellow attack. It put in place sea-based mine countermeasures to secure its coasts, conducted its annual nuclear command and control exercises, and released a public statement warning that an attack by either Yellow or Orange would be viewed as an attack by both, and dealt with accordingly.

### Conclusion

In the post-scenario discussion, the Red team stated that their primary internal debate this round revolved around whether or not to posture a direct ascent ASAT as saber rattling to cause Blue and Orange to back down. Yellow stated they were confused during the scenario as to why Red was making such a threat.

The Blue Team stated that they backed away the inspection satellites in the first move, because they were concerned about their ability to avoid a collision that would escalate the situation, driven largely by the link between those satellites and Yellow's nuclear warning system. The Blue team stated that they launched the multiple cyber attacks on Yellow, and jammed PNT over their own territory, in order to degrade Yellow's ability to conduct over-the-horizon precision attacks, and as a proportional response to Yellow cyber attacks. Once Blue realized that the main objective was not to be attacked, they were fine with letting people know it was a rogue entity behind the initial terror attacks. They also explained that while in this scenario having inspection assets near strategic assets mattered more than being next to "tactical" assets, the team members admitted that they were not sure that line would be as clear in the real world, and that it is very hard to tell where that threshold is. They also commented that when an adversary is nuclear-armed, that changes all calculations.

Yellow noted that it didn't retaliate or escalate after the Blue cyber attacks on homeland, because it felt the objectives given to Yellow for that scenario were met and the attacks were tit-for-tat with what they had done the round prior. They also noted that all of their objectives were met in the first move, so they didn't need to execute any more kinetic options.

The Orange team didn't respond to Blue's overtures because it didn't include Yellow. They couldn't agree to anything that excluded Yellow, but didn't want to get caught up in big power war. They also wanted Red to get involved, then felt they had succeeded in getting Yellow and Red involved in deterring Blue. At the end of the scenario, Orange attacked Blue's SSA ground stations to remove Blue's offensive co-orbital space capabilities, which also served well as a response to public demands for action.