

MANAGED BY UT-BATTELLE FOR THE DEPARTMENT OF ENERGY

Virtual TTX Battleboard Engagement

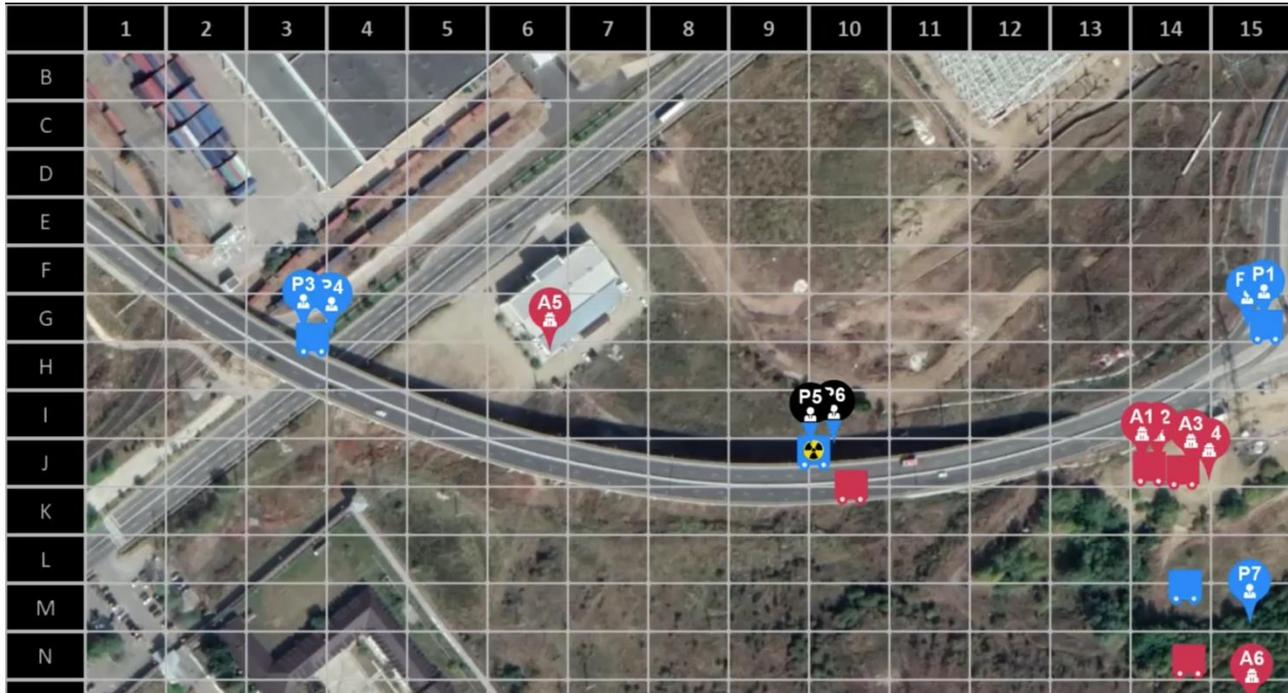


Figure 1 - an example of a shipment convoy for a virtual battleboard exercise

Needed Tools

- **Virtual Platform (VP)** – Zoom, WebEx, Adobe Connect, GoToMeeting, etc.
- **Open Broadcasting Software (OBS)**
- **Media Assets** – Player and Vehicle Tokens, Battleboard digital map feed, Dashboard Log Tool, Hit Tables, Random Number Generator
- **Google Earth Application**

Overview

OBS is a free, open-source, cross-platform software used for video recording, video broadcasting, and live streaming. In the VP environment it can be used to facilitate virtual meeting production and display battleboard simulations. OBS consists of a GUI dashboard where web camera feeds, digital images, and presentation assets are organized into “OBS Scenes.” Scenes are fed into a single live screen video image that can be shared into the meeting as a virtual web camera. OBS provides a professional video experience similar to a full network production staff broadcast but is easily managed by a single producer on a single computer.

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Personnel Roles

Virtual Platform Producer:

Controls the Virtual Platform and is responsible for facilitating meeting participant interactions. The producer also supports SME teams during the engagement to create breakout meeting rooms, enable and organize translator audio and video feeds, and coordinate livestreams and presentations.

TTX Assistant Producer (AP1):

Uses OBS Software to run the Virtual Battleboard Map, moving digital player and vehicle tokens for Adversaries and Protective Forces under the direction of the SME team. The AP1 alters tokens as gameplay proceeds to show each token's miss/wound/kill status.

Dashboard Assistant Producer 2 (AP2):

The AP2 updates the browser-based Dashboard Event Log, journaling gameplay as it progresses. The AP2 uses a random number generator and Hit/Kill Chart to determine player status in real time. AP2 communicates with production team so AP1 can update player token status directly on the battleboard. When completed, AP2's Dashboard Event Log provides a timeline of all player actions for later review and instruction.

SME Teams:

Provide instruction to participants, dividing them into Adversaries and Pro Force teams before battleboard engagement begins. SMEs also act as referees during the engagement, and issue rulings for any disputes or unrealistic actions. SME team facilitates the conversations in the virtual platform breakout rooms for the two teams.

Additional Needs

Internet and Computer Access:

All physically grouped participants or individually joining participants will need a computer (or conference room) with internet access to join the virtual event and participant in the Battleboard. If a room of participants are joining, then ideally a second physical room would be available for when the event splits into breakout rooms for each opposing team.

Benefits of Virtual Battleboard

Printed Material and Game Pieces:

Compared to traditional Battleboards, Virtual Battleboards do not require the purchase, delivery and maintenance of the printed maps and game pieces (player tokens) as all the



Figure 2 - an example of a printed map and tokens brought to a country event

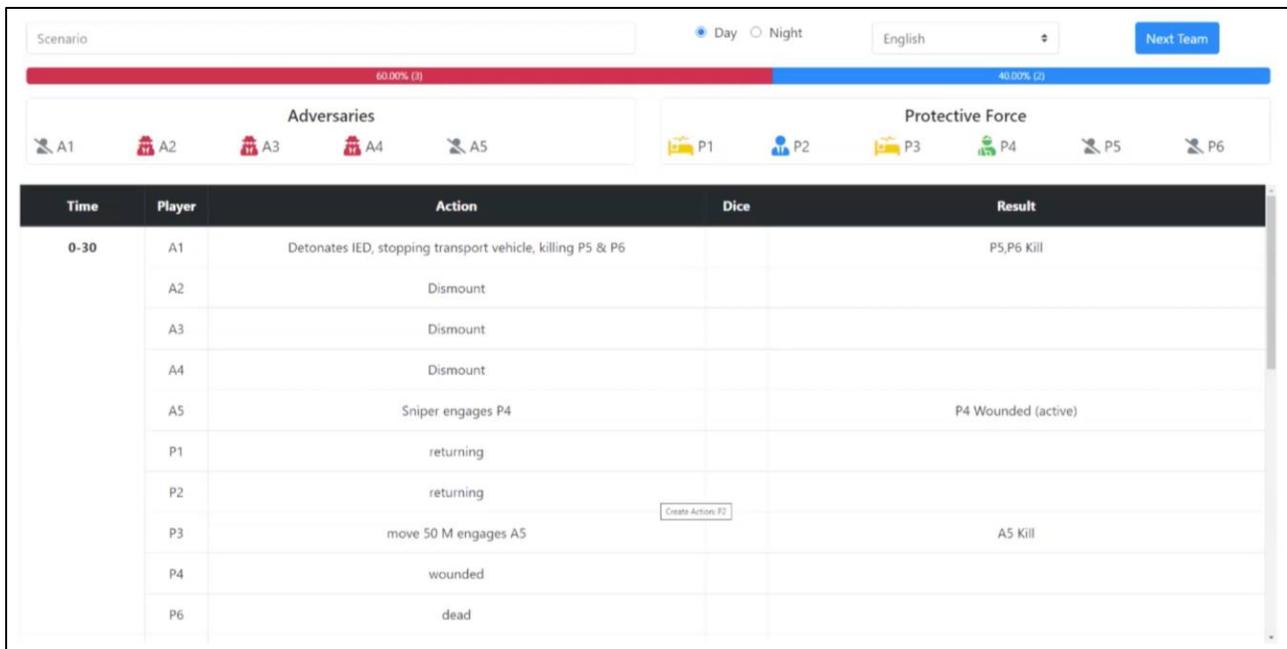
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required pieces are developed and used with OBS on a digital map. The digital map allows for any location to be dynamically chosen at the SME teams discretion.

Training Space:

It also does not require renting additional conference rooms and spaces to separate the participant teams (Protective Force and Adversaries) because the production team will utilize the “breakout room” features of the virtual platform then separate the teams for planning and implementation.



Time	Player	Action	Dice	Result
0-30	A1	Detonates IED, stopping transport vehicle, killing P5 & P6		P5,P6 Kill
	A2	Dismount		
	A3	Dismount		
	A4	Dismount		
	A5	Sniper engages P4		P4 Wounded (active)
	P1	returning		
	P2	returning		
	P3	move 50 M engages A5	Create Action: R2	A5 Kill
	P4	wounded		
	P6	dead		

Figure 3 - an example of the battleboard dashboard log tool which documents team actions for later reporting. The tool interface supports multiple languages.

After-Action Review and Discussions:

Finally, the Virtual Battleboard Dashboard Log Tool makes it easier for the instructors to review the events of the engagement. Screenshots of specific points during the engagement and the Battleboard Dashboard tool are captured throughout and instructors can reference specific events and steps and direct the participants to areas of improvement and change. These images and logs can also be utilized in the post training report and monthly program highlights.