CGI's 3D Visualization Solutions:

Platforms for tracking, simulating, evaluating and decision making

3D makes the world transparent and improves decision making in complex spatial environments.

These platforms enable users to stand beside a real table and assess a situation using a virtual field in 3D. For the armed forces, the use of 3D provides the ability to view the battlefield or exercise venue through spatially accurate and static assets, thus providing a real-time edge to the unit enabling victory at every level.

Bridging Dimensions

In addition to rendering a three-dimensional image for users wearing the 3D Augmented Reality (AR) HoloLens, CGI's 3D platforms can synchronize with 2D devices such as laptop or tablet computers so that the same information, minus the AR rendering, is available to others who need it. 3D brings the information to life and allows the user to see the battlefield or exercise prior to execution; thus the ability to walk the terrain and know the situation that the units may face.

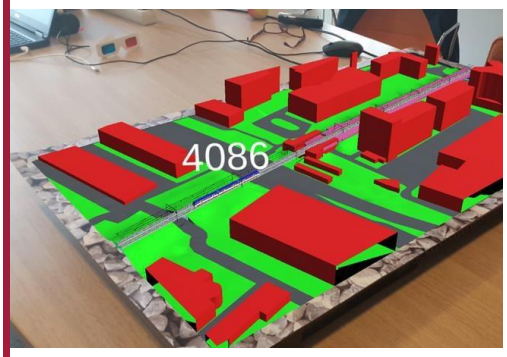
Imagine the benefits such a system holds for the U.S. warfighter. Vehicles, convoys, personnel and material could be tracked in 3D mode for headquarters and 2D mode for the field. 3D imaging and tracking provides appreciation for the complexity of the battlefield and thus, supports the warfighter with correct application of enablers in order to ensure the bid for victory.

Spatial Awareness

A 3D map is essential to military planning and operations. It allows for the efficient sharing of information in a physical mode – an exact representation of what personnel are seeing in the field. A 3D map reflects the reality more accurately, adding a representation of height and depth that makes immediate sense to the eye. These elements are often missing or confused in 2D representations.

A comprehensive picture of the situation, including all required information, can be created innovatively by linking the 3D image with all relevant data: geographical, material, situational or otherwise providing a Common Operational Picture.

This information provides the insight warfighters need in support of managing assets and training and simulation efforts. If training officers and the warfighter can see the heights of structures and moving assets, including fellow soldiers, in real-time 3D – across a variety of platforms – they can quickly identify potential scenarios, improving the soldiers' response to training. The same tool can be used for training or real-life Crisis Situations, Foreign Humanitarian Assistance, Non Combatant



3D MAP TABLE

The 3D map table offers the possibility to view the following information in 3D:

- The current environment (topography)
- Positions of moving objects (real-time and 3D)
- Indications of other objects
- Additional (possibly dynamic) objects on static positions

CGI's 3D visualization solutions provide a suitable platform to collaborate with personnel in another location.

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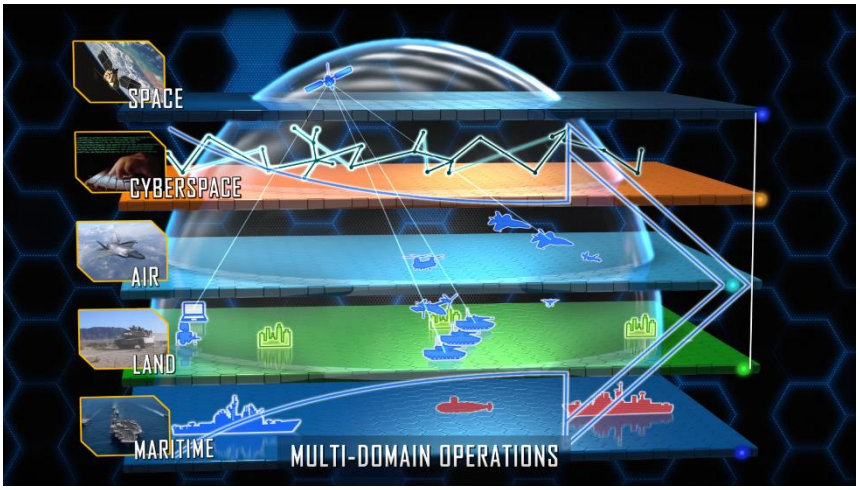
Evacuation Operations and Defense in Support of Civil Authorities in providing the warfighter with the 3D information to assess terrain, road conditions, buildings and other parameters in order to determine which means of transport emergency services should use to answer the call.

Bringing Benefits to the 3D Table

- Control your operation using a virtual real-time 3D image reflecting the real operational environment
- Plan your operation using the current situation or future scenarios
- Work together in collaboration around the 3D image with the ability to conduct internal and external rehearsals
- Use different types of data to create a Common Operational Picture, such as:
  - Real-time Sensor/IoT data (real-time analytics and moving objects)
  - 3D data
  - Big Data
  - Social and other types of open data
  - Asset location and information



Characteristics

CGI's 3D visual solutions leverage a horizontal touch-screen, allowing interaction with the 3D model (pan, zoom and rotate) while the 3D image itself is viewed with linked peripherals, such as:

- One or more HoloLens devices
- One or more smartphones or tablets

The information is shared between all viewers. Every participant will see the 3D model from a unique angle, depending on the location and line of sight between the viewer and the 3D image.

ABOUT CGI FEDERAL

CGI Federal Inc. is a wholly-owned U.S. operating subsidiary of CGI Inc., dedicated to partnering with federal agencies to provide solutions for defense, civilian, healthcare and intelligence missions. Founded in 1976, CGI is among the largest IT and business consulting services firms in the world. Operating across the globe, CGI delivers end-to-end capabilities, from strategic IT and business consulting to systems integration, managed IT and business process services and intellectual property solutions, helping clients achieve their goals, including becoming customer-centric digital enterprises.

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