

CONTENT

# VELOCITY

UNLEASHING YOUR DATA. ONE MISSION AT A TIME.

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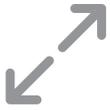
VELOCITY is a software solution that revolutionizes the way organizations manage the production of large virtual environments for use in defense and security applications.

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**PRESAGIS**  
MAKE IT REAL

**VELOCITY is a software solution that revolutionizes the way organizations manage the production of large virtual environments. By combining best-of-breed tools with next-generation architecture, VELOCITY provides breakthrough performance in geo-localized content management.**

## BENEFITS



### SCALABLE

VELOCITY grows with your production pipeline and can manage larger and larger volumes of data.



### FAST TERRAIN GENERATION

Quickly create large-scale, detailed terrains through geo-specific procedural modeling.



### SHAREABLE

VELOCITY builds terrains using a wide range of traditional and non-traditional formats, so databases can be shared for joint operations, or integrated in any simulation framework.



### COST-EFFECTIVE

Through workflow automation and massive distributed build, VELOCITY will allow you to do more with less as a constant quality level.



### UPDATEABLE

Thanks to built-in tracking of sources, VELOCITY will focus on only processing new data and allow you to perform incremental updates rather than reprocessing all of your content every time there is a change.



## CONTENT IS GETTING HARDER TO PRODUCE

Data is increasingly critical to modern simulation and training.

Conventional, manual approaches to managing geo-located data are inefficient, costly and incapable of scaling to the levels demanded in building today's complex virtual environments. New data collection platforms, emerging types of data, greater levels of detail, and sheer volume, threaten to overwhelm the 3D synthetic environments creation pipeline.

As the volume of available data explodes, clients face a stark choice; ignore precious data updates, or streamline processes to manage increased volumes and complexity. Using an efficient and customizable workflow is a critical component in creating realistic, data-rich environments.

To accomplish this, Presagis has developed VELOCITY.

From 2D to 3D, users can use VELOCITY to seamlessly transform diverse GIS data streams into rich virtual environments. From geo-specific terrain databases needed for mission rehearsals to procedurally generated geo-typical terrains that save you time and money, we can help you rapidly build a vast or localized database that fits your budget and schedule.

*" WE ARE STANDING WHERE THE SIGINT COMMUNITY STOOD WHEN THE INTERNET BECAME THE DIGITAL FABRIC OF THE PLANET. AND WHETHER OUR NEW PERSISTENT VIEW OF THE WORLD COMES FROM SPACE, AIR, SEA, OR GROUND - IN FIVE YEARS, THERE MAY BE A MILLION TIMES MORE THAN THE AMOUNT OF GEOSPATIAL DATA THAT WE HAVE TODAY. YES, A MILLION TIMES MORE. "*

Robert Cardillo, Director,  
National Geospatial-Intelligence Agency, USA



## WHAT IS VELOCITY?

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VELOCITY is a software solution that revolutionizes the way organizations manage the production of large virtual environments. By combining best-of-breed tools with next-generation architecture, VELOCITY provides breakthrough performance in geo-localized content management. From 2D to 3D, clients can seamlessly transform diverse GIS data streams into rich, multi-spectral environments, complete with pattern of life, humans, crowds, traffic, interactions, and behaviors.

For use in defense and security applications, VELOCITY is a new technology and methodology aimed at streamlining and integrating massive amounts of GIS data to produce large, realistic 3D virtual environments. Flexible, cross-platform, and cloud-ready, VELOCITY offers a way forward for organizations looking for a centralized asset management approach that scales with evolving requirements. By using widely-available data, classified information, or a blend, VELOCITY was designed to layer as much or as little data as required.

From geo-specific terrain databases needed for mission rehearsals to procedurally generated geo-typical training terrains that save you time and money, Presagis can help you rapidly build a vast or localized database that fits your budget and schedule.

Whether you are creating a virtual environment to be visible by UAV sensors from 60,000 feet, 10,000 feet on a combat aircraft, from a helicopter at 2,000 feet, or from a human at ground level, the accuracy and representation must be precise, reliable and shareable. Being able to support data with a shareable data format is paramount. For this reason, VELOCITY supports a wide variety of data formats including OGC CDB, OpenFlight, and FBX – which can be exported to many other traditional and non-traditional formats, including game engines, such as Unreal® UE4 and Unity® software.

# WIDE-RANGING SUPPORT

VELOCITY offers a wide range of solutions ranging from specific simulation-ready databases all the way to enterprise-wide custom production capabilities tailored to your requirements. In addition, VELOCITY supports all major industry formats.

- \ OGC CDB
- \ OpenFlight
- \ VBS
- \ OTF
- \ FBX
- \ Game engines, such as Unreal® UE4 and Unity® software

## VELOCITY WORKFLOW

Here is an example of the workflow used to build a major city with geo-specific roads and landmarks:

### STEP 1 : GENERATE ROADS FROM OSM DATA

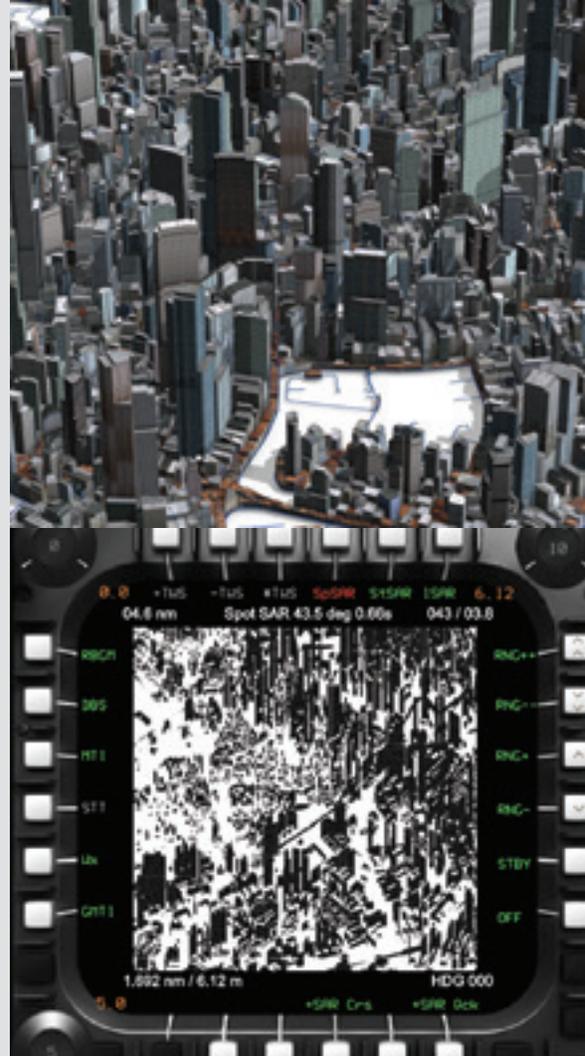
Roads are the backbone of cities and are needed to procedurally generate 3D roads using, for example, OpenStreetMap vector data.

### STEP 2: DETECT AND EXTRACT CITY BLOCKS, BUILDING LOTS AND CADASTERS

To generate buildings to appear in the spaces in-between the roads, i.e. : Create building lots and footprints.

### STEP 3: GENERATE BUILDINGS

Finally, place buildings and bridges to fit in the generated building footprints and roads respectively.



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