

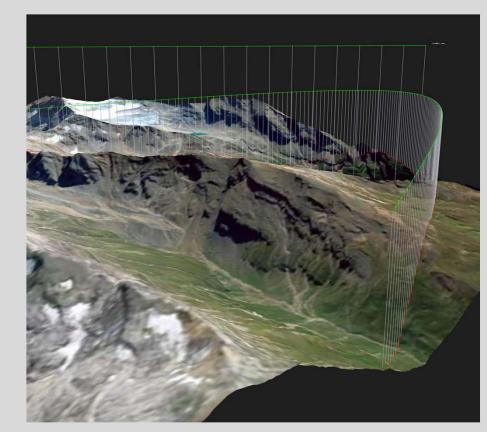
Digital Twins Command, control, intelligence Training

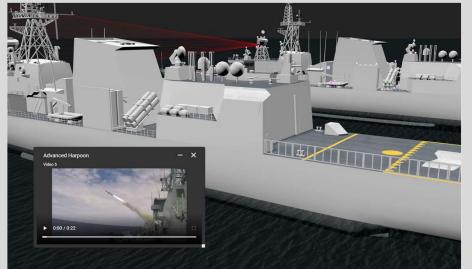
High-performance game engine core 3D web applications Real-time Interactive Animation Any browser, OS, device NO software or extensions to install

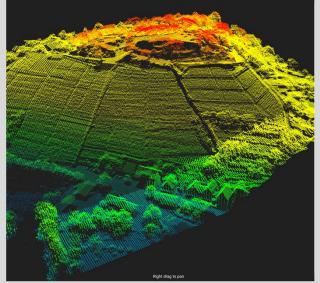


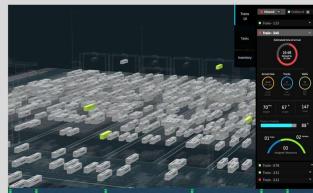
Services Solution engineering 3D UX design and development Implementation Support

chris.erickson@datifex.com www.datifex.com





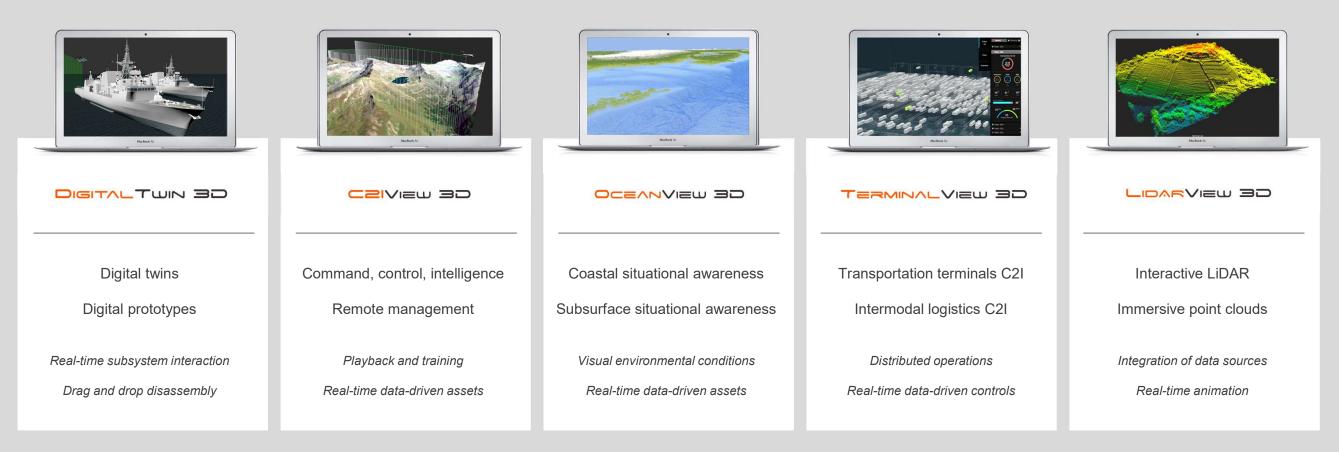






## INTELLIVIEW 3D<sup>™</sup> Engine

Real-time interactive 3D web applications



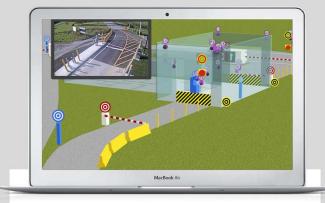
## 

## Real-time interactive 3D web applications



## Why?

Natural experience "Single pane of glass" Broader group of users Collaboration Reduced time from insight to action Safety Communication Training



### Requirements

Chrome, Safari, Edge, Firefox Win10, MacOS, iOS, Android, Linux NO executables NO extensions Laptops Tablets Phones ANY digital model



### Technical

High-performance game engine core Real-time interactive web apps 10,000+ interactive objects Unlimited users Data-driven Scalable External controls JavaScript Libraries



# INTELLIVIEW 3D<sup>™</sup> Engine

Real-time interactive 3D web applications



#### DIGITAL TWIN 3D

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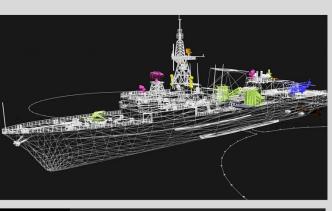
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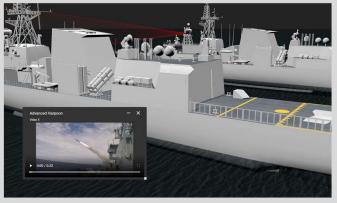












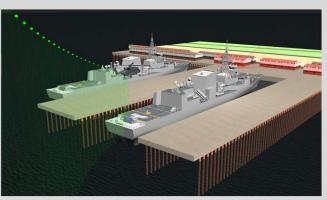
Begin with AutoCAD, 3ds Max, Blender, .obj digital models.

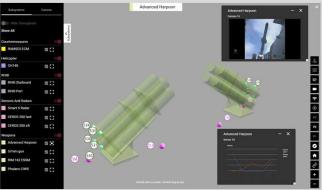
Watch real-time video sources by clicking on cameras on the ship.

Investigate subsystem detail and sensors.

Watch the operation of radar, helicopter, RHIB and other subsystems using stored or real-time data.

Use game engine to detect RADHAZ.







### DIGITAL TWIN 3D

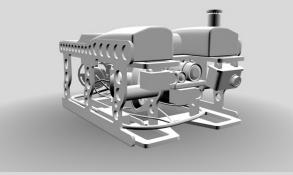
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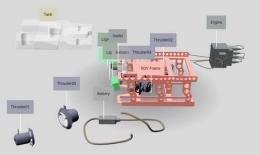


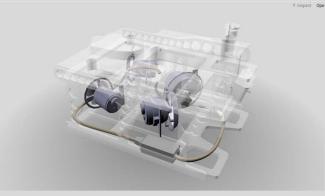
Convert static AutoCAD, 3ds Max, Blender, .obj digital models into interactive and animated digital prototypes.



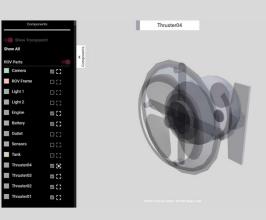


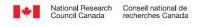
Use controls to operate and test the prototype and its components.





Drag components to deconstruct prototype





#### DIGITAL TUIN 3D

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Track passengers and crew in real-time and turn on tags to show passenger meta-data.



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Everyone with access to the network can view and interact

with the aircraft and its sensors.

Communicate research and results to management and customers by playing back recorded data at any time and from any computer with a modern browser.



Associate aircraft cabin sensors to digital objects to watch real-time activity, and for playback.



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Unmanned aerial vehicles

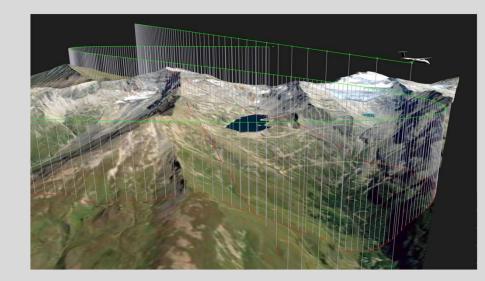


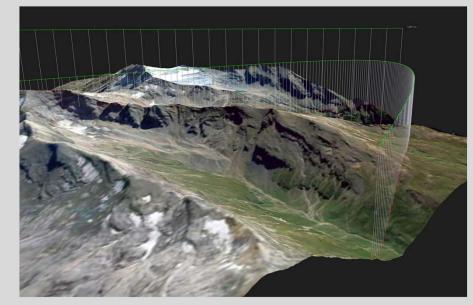
Swarm drones

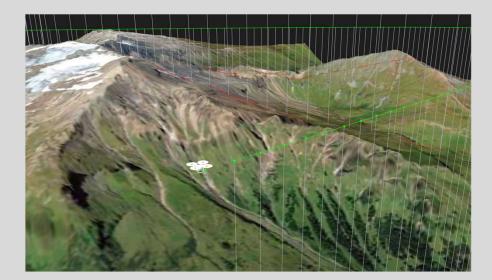


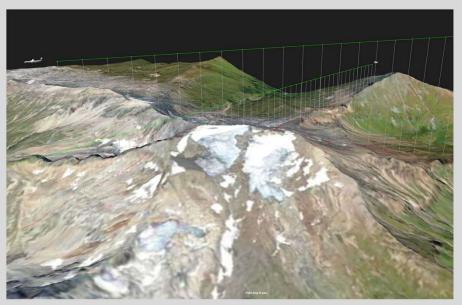
Missile defense systems













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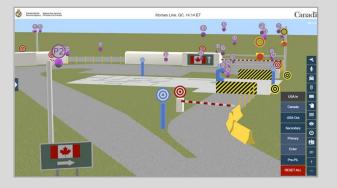
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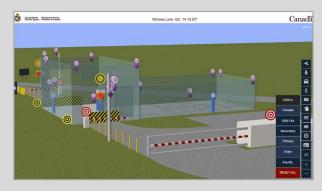








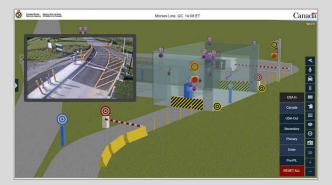




Control gates, doors, lights and licence plate readers.

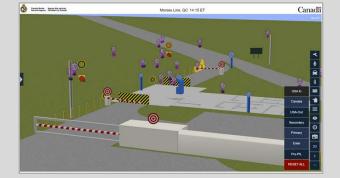
View real-time video feeds by selecting a camera.

Integrate with backend systems.



Playback stored data for training and forensics.

Collaborate with supervisors and other staff simultaneously connected to border facility.







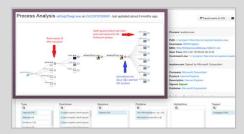






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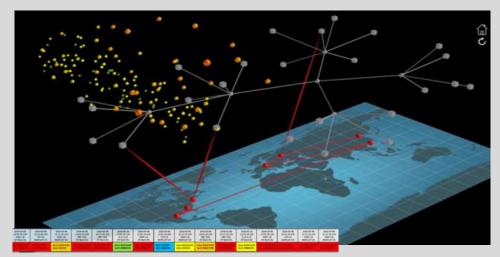
Combine legacy systems into a single pane of glass.



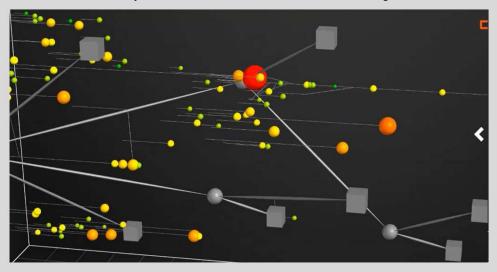
Click on objects to see meta data, and to take control of routers and switches.



Watch real-time progression of viruses through public and private networks.



Playback recorded data for forensics and training.



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Details

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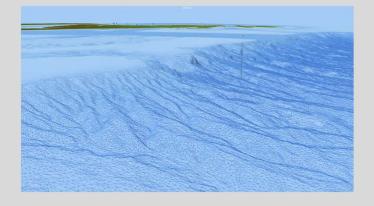
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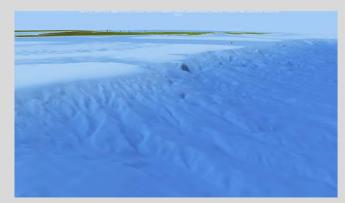






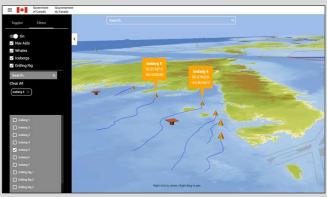


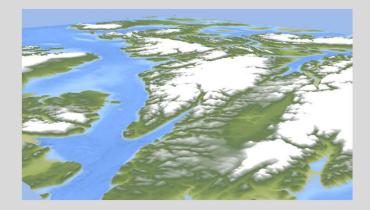
Investigate ocean topology generated with opensource mesh data.



Track whales and submersible routes in real-time.

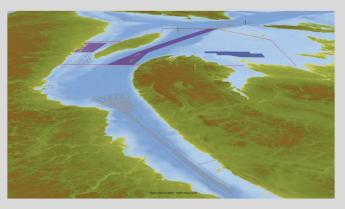
Watch animation of iceberg movement.





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Superimpose shipping lane, protected areas, dedicated fishing locations and navigation aids.





#### TERMINALVIEW 30

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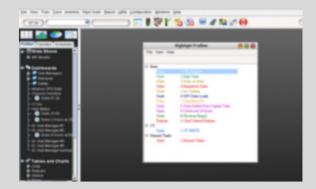
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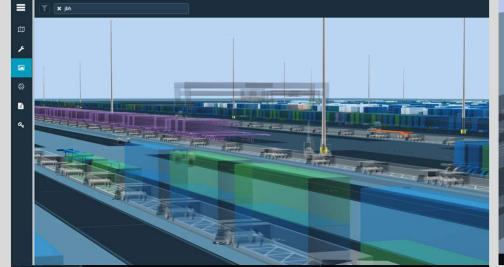
#### Excel source for yard definition

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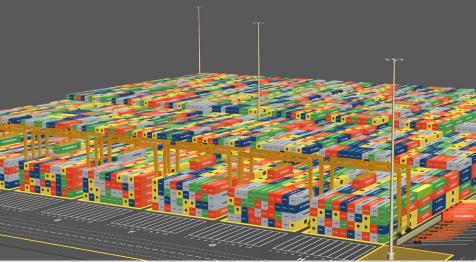
#### Existing real-time and static data sources



#### Al to detect and automatically correct operational errors in real-time



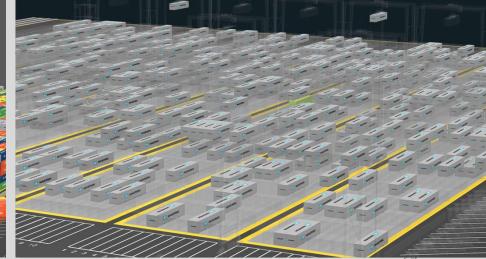
Watch 10's of thousands of containers moving through the port in real-time.



#### Lots List Waypoints Routes Assets assigned to slot 3-31-794: <u>SNLU985888</u>, <u>TCNU864810, TLXZ505898</u> Object position Gates Stack Units 🕖 Transparent Invisible 🍳 🔵 Tags Flagged Data Shortcuts **Highlight profiles** Test Tool Data Socket Messages Automated QA Keep Alive Timer Demo Mode Real-time Data BNSF

Real-time controls

Filter the venue to reveal information that cannot be seen in databases.



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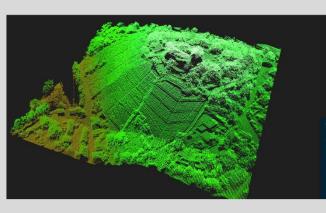
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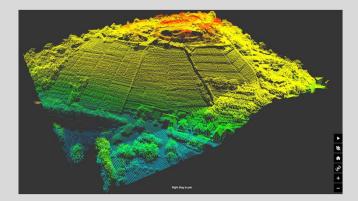






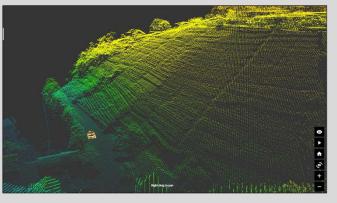


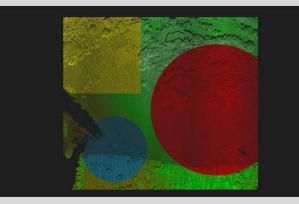
Apply colour to points based on altitude data.



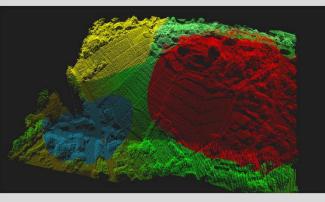
Look at scene from a 2D orthographic view.

Add real-time animated objects (i.e. tank) to static LIDAR environment.





Combine multiple sources of data into a single pane of glass, like an autonomous vehicle's LIDAR vision system and heat map sensors to see what the vehicle perceives in real-time.







# ABB

DIGITAL TUIN 30

#### DIGITALTUN 30



