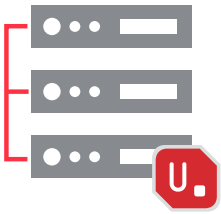
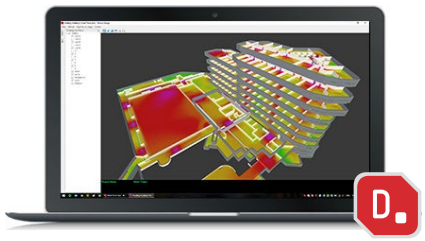
iBwave

GIS DESIGN API

The **GIS Design API** is a Read-only REST API to access detailed design information from the Unity platform in GIS friendly format. It provides the ability to extract design information from an iBwave project and make it available to external system. The API allows to interoperate seamlessly with various applications that can leverage design information (floor plans, network design, prediction) to automate processes and remove manual tasks.



iBwave **Unity**



iBwave **Design**

iBwave **Mobile**

GIS Design API
{REST:API}

BACKEND APPS

DATABASE OF RECORD	PERFORMANCE & MONITORING	INVENTORY
BIG DATA	LOCATION BASED SERVICES	OEM CONFIG TOOL

iBwave

Use-Cases

INVENTORY SYSTEM INTEGRATION

Transfer network design information from iBwave to an internal network inventory system combining indoor and outdoor.

PERFORMANCE AND MONITORING SYSTEM INTEGRATION

Transfer floor plans and geolocation of network equipment to Monitoring and Performance Systems with the goal of providing more information to the operation and maintenance team and accelerate resolution of network issues.

LOCATION BASED SERVICES INTEGRATION

Leverage iBwave prediction maps to increate accuracy of location based services for marketing applications (ex: location of critical assets in a hospital).

HOLISTIC VIEW OF THE NETWORK

Integration in-building design information on existing GIS applications to provide a holistic view of the network combining indoor networks (wireless/wireline) with outdoor infrastructure (fiber, wireless sites) and macro coverage.

BIG DATA ANALYSIS

Turn iBwave Design information into business intelligence. For example, combine iBwave prediction with OSS user data to understand consumer behavior in retail stores.

DATABASE OF RECORD INTEGRATION

Transfer design information in iBwave to your internal database of record for long term archiving and more control and independence via your software suppliers.

Technical Specifications

The GIS Design API is a RESTful API available with Unity Enterprise that offers the following end points:

End Points	Description
Get Projects	Returns the list of projects on the Unity platform. Filtering by Project Name is available.
Get Buildings	Returns the list of building for a given project.
Get Floor Images (GeoTIFF)	Returns the floor plan image associated with a given floor plan. Returned as a GeoTIFF file.
Get Walls	Returns the list of Walls for a given floor. All walls are returned as a 3D WKT polylines with associated wall material information.
Get Surfaces	Returns the list of Surfaces for a given floor. All surfaces are returned as a 3D WKT polygons with associated surface material information.
Get Equipment and Configuration	Returns the list of network equipment for a given floor. All Equipment are returned as 3D WKT points with all the associated attributes (manufacturer, model, configuration, etc.).
Get Cables and Cable Segments	Returns the list of cables for a given project. Each cable is broken in cable segments for each floor, returned as 3D WKT polylines with all associated attributes. All cable elements are returned with port, connector and strand (for fiber cable) information.
Get Wireless Configuration	Returns the list of Wireless Services and Wireless Systems associated with a given project. The complete wireless configuration (Band, technology, channel, PCI, etc.) is returned with associated network equipment source.
Get Prediction Maps (GeoTIFF)	Returns the list of prediction maps associated with a wireless service and floor. All prediction maps are available with raw data values and GeoTIFF file.

GIS Interface

All objects returned by the **GIS Design API** are returned with WKT 3D geometry information so that the elements from the design can easily be integrated in GIS based application.