/// **GPRS LASER SCANNING** SERVICES

MIXED REALITY DEVELOPMENT MODELS

3D laser scanning can be used to create 3D models and 3D mesh files for use in mixed reality, projection mapping and 3D gaming. When generating virtual reality experiences, computer-generated objects must precisely interact with the physical environment. 3D laser scan technology documents real-world environments with millimeter precision and GPRS reconstructs them into a dimensionally-accurate 3D digital representation. Environments are quickly captured and rendered and prove to be more realistic and more engaging. Once the environments are in your database, they can be adjusted and modified. Photorealistic assets are delivered in high-detail with texture, the perfect element for stunning visualization applications.

CASE STUDY:
MIXED REALITY 04

TASK:

GPRS 3D laser scanned The Bank of America Stadium and a Panther Statue for The Famous Group and the Carolina Panthers to create a mixed-reality experience for the home opening football game vs. the New York Jets.

PROJECT APPLICATION:

Those in attendance at the game were treated to a mixed reality experience that included an enormous virtual panther skulking menacingly throughout The Bank of America Stadium. 70,000 fans watched as the digital feline leaped from the center of the stadium and up onto the Jumbotron. At one point the panther used its teeth to rip down a mixed reality Jets flag before tearing it to shreds on the field.

PROBLEM

■ To sell the realism of mixed reality, computer-generated objects must precisely interact with the physical environment.

■ As-built information and a 3D model of The Bank of America Stadium did not exist.
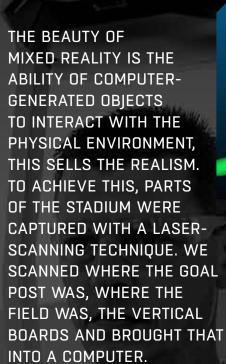
SOLUTION

■ In 1 ½ days on site, using a Leica P40 ScanStation, point cloud data of the interior field, stadium bowl, seating and upper rigging area was captured.

■ To give the panther virtual objects to climb on and interact with, CAD technicians used the point cloud data to create a Revit 2021 LOD 200 3D model of the stadium.

■ The panther statue at the front of the stadium was 3D laser scanned to create a triangulated 3D mesh model in .fbx file format for the animation/CGI.

BENEFITS

■ 3D laser scanning is a fast and accurate way to digitize real-world objects for use in computer-aided design (CAD) and mixed reality.

■ 3D models are created in our corporate office by experienced engineers and CAD technicians.

> "THE BEAUTY OF MIXED REALITY IS THE ABILITY OF COMPUTER-GENERATED OBJECTS TO INTERACT WITH THE PHYSICAL ENVIRONMENT, THIS SELLS THE REALISM. TO ACHIEVE THIS, PARTS OF THE STADIUM WERE CAPTURED WITH A LASER-SCANNING TECHNIQUE. WE SCANNED WHERE THE GOAL POST WAS, WHERE THE FIELD WAS, THE VERTICAL BOARDS AND BROUGHT THAT INTO A COMPUTER.

GREG HARVEY | THE FAMOUS GROUP