

## INNOVATIVE APPROACHES TO ELUCIDATE OPTIMAL DEPLOYMENT OF CB SENSING ASSETS

# Using AI/ML To Leverage Up-to-date Building Plans, Which Exist For The Vast Majority Of Buildings Worldwide And Are Currently Wholly Unusable, And To Search Within These Building Plans Or Across Entire Government Database(s) Containing These Plans As Raw Permitting Records For Indicia Of Chemical And Biological Weapons Manufacture, Storage And Transportation, In Real Time, At Scale And With Global Reach, Including Any Type Of Building Data Typically Found In A Set Of Building Plans Such As Indicia Of Biological, Chemical And Other Activities

Charles Carrington IndoorGEO, LLC

BUILDING PLANS EXIST FOR VAST MAJORITY OF BUILDINGS WORLDWIDE, BUT ARE UNUSABLE. Government permitting of new construction and renovations is a worldwide practice going back many decades. These records are PDFs and are typically required by law to be stored indefinitely as public records. While some developing countries may not have permitting, most do. The situation is the reverse of what one may think. Permitting is not costly to set up and actually serves as a primary source of funding for the government. Moreover, assuring compliance with building and fire codes ranks among the most basic of public sector services. Once permitting is in place, failure to obtain permits for new construction and renovations is a violation of law. Therefore, building permitting records by law are complete and up-to-date, including the original plans as well as plans for later renovations. **TECHNOLOGICAL PROBLEM SOLVED BY INDOORGEO.** Building plans exist for the vast majority of buildings worldwide, as outlined above. However, the records are PDFs and unusable. Intelligence analysts in the Army, USAF, Navy, Marine Corps, Global Strike Command, AFRL/RV, DIA, SOCOM, NGA, NRO, NGIC and NSA currently devote hours or days per building to generate a 3D model from a plan set. A solution for quickly converting PDFs of plans to CAD/3D, without manual efforts has eluded the special operations and geospatial intelligence communities as well as architectural/building industries in the commercial sector ("Applicable Industries") for several decades. Using artificial intelligence/machine learning ("AI/ML") developed over a 4.5-year period, IndoorGEO instantly converts PDFs of plans to indoor CAD/3D and into the entirely new geospatial environment of predictions – all industry firsts in the Applicable Industries. For DTRA-JSTO's unique mission, once the plans are in our AI/ML environment, IndoorGEO can perform the capabilities listed below (BLUF), in real time, at scale and with global reach. We have shared our capabilities with experts in the Applicable Industries and they are excited about IndoorGEO and advise that our solutions are hugely transformative in their respective industries. [12 U.S. Patents and 4 Patents Pending (U.S. and International)]

BLUF. IndoorGEO's mission is to provide the defense and intelligence communities with the ability to make better decisions faster than our adversaries by giving them the following capabilities using advanced AI/ML, in real time, at scale and with global reach (TRL 9 and COTS ready):

- Quickly searching entire government databases of raw permitting records for any type of building data, [e.g., indicia of biological, chemical and other activities, basements, hidden rooms, server/control rooms, video/security systems (ethernet and optical fiber), WiFi, electrical closets, service panels, mechanical rooms and ventilation]
- Automated attribution of above-listed attributes and any other type of building data
- Structural elements and wall composition (concrete block, steel-reinforced concrete, wood-frame, etc.)
- Processing any raw plan set (or a database of raw permitting records) from PDF (flat image/raster) to CAD/3D
- Portable and deployable worldwide

IndoorGEO can provide a briefing or demonstration at your location to further explain our capabilities and discuss how IndoorGEO can meet your mission needs.