3D Wireless Bridge Inspection Tablet App
Allows MDOT Bridge Inspectors to Enter Element-level Condition State Data by Interacting with a 3D Bridge Model

Purpose
Replace paper inspection forms
Display past inspection data, including photos
Integrate with MDOT Bridge Reporting System
Enable future Remote Sensing data

Approach
Design user interface around interactive model of the bridge
Employ context-sensitive elements
Leverage 3D game rendering framework to develop a portable native mobile application

Benefits
Observations (e.g., cracks) are tagged to 3D locations on bridge, replacing current practice of aggregating cracks for an entire element (e.g., deck)
Eliminates field-to-office double data entry

Database to 3D Model

Leverage 3D game engine and open source tools

Query by BridgeID
Apply Bridge Rules
Calculate Scale and Position
Interact with and mark up a true 3D representation of bridge

Add GPS-tagged photos and remote sensing data

Integrate with MDOT Bridge Management system over cellular data network

Creating the future... of MDOT bridge inspections