

The InspectTech



Difference: Software Solutions for Inspection and Asset Management

By Brian Leshko, P.E.



Using advanced software tools allows HDR to provide clients the information they need to keep their structures open to traffic and improve the efficacy of overall transportation operations. In addition to developing in-house Microsoft Access-based software applications for inspection and asset management, HDR has also engaged software companies such as InspectTech, which creates off-the-shelf software for inspections of bridges and structures. HDR's bridge inspection staff has worked directly with InspectTech since 2004, and we were one of the first companies to beta test and fully implement its bridge inspection applications.

InspectTech's mobile inspection and asset management solutions enable HDR bridge inspectors to more effectively collect, analyze and manage inspection data. The software offers numerous advantages, including advanced report generation, security features, searching capabilities/data retrieval, enhanced richness of data (pictures, video, audio and other PDF files) and many other features that add to the overall quality of the reports and productivity of management. InspectTech's software has been used successfully by HDR on a wide variety of infrastructure assets, such as bridges, culverts, signs, water control structures, retaining walls, and other ancillary structures. Using software developed by InspectTech allows HDR to lower the total cost of inspections and guides our clients to better, more informative decision making.

InspectTech's core software, BridgeInspect Collector/Manager™, can be customized to meet the specific needs of each client. It also allows for quick and efficient integration of National Bridge Inventory (NBI), Pontis/Element Level data and custom databases into a single, easy to use, flexible system. HDR has implemented the product for a variety of clients, including federal agencies, state departments of transportation (DOTs), major transit agencies, toll authorities, counties and cities. Our primary goal is to help clients manage and maintain their assets to the highest possible degree.

Technology Defined

BridgeInspect Collector streamlines the inspection process and generates complete, formatted reports with the click of a button. The Collector software can be utilized in the field or back at the office, and has proven to save time and money and reduce errors. In the field, the software runs on laptops/tablets, and an Internet version allows access from any location. The software allows for enhanced reporting, editing, submitting and QA/QC.

HDR bridge inspectors can attach digital inspection photos directly to a report or link a photo to a specific field to more accurately depict

the situation. Pictures have become one of the most important aspects of inspection reports because they provide further insight into the condition of an asset. Attaching and organizing pictures within an inspection report used to consume a great deal of time, but now the process takes only seconds.

Our inspectors can scan any document and include it as an attachment in the report. These scanned items include drawings, sketches, maps and other important documents. In addition, old inspection reports can be scanned and placed into a database for reference, allowing us to provide the most thorough and accurate report possible. The software also auto-populates an inspection report with data from past reports. This eliminates the need to re-enter constant data from year to year and significantly reduces the time it takes to complete a report. Plus, when a field is changed, it will be highlighted; this can be used to track changes from the last time the bridge was inspected (an attribute tracked by many of HDR's DOT clients).

Finally, the Collector software features drop-down menus that give the inspector a set group of choices for each specific field. Only valid selections are shown and explanations from the integrated bridge inspection manual are given.

Technology Applied

The InspectTech/HDR Team was selected early in 2011 for the "Enhancement and Support of Pontis 5.1.2" Project for AASHTOWare. InspectTech is leading the software improvements to Pontis, and HDR will perform alpha and beta testing.

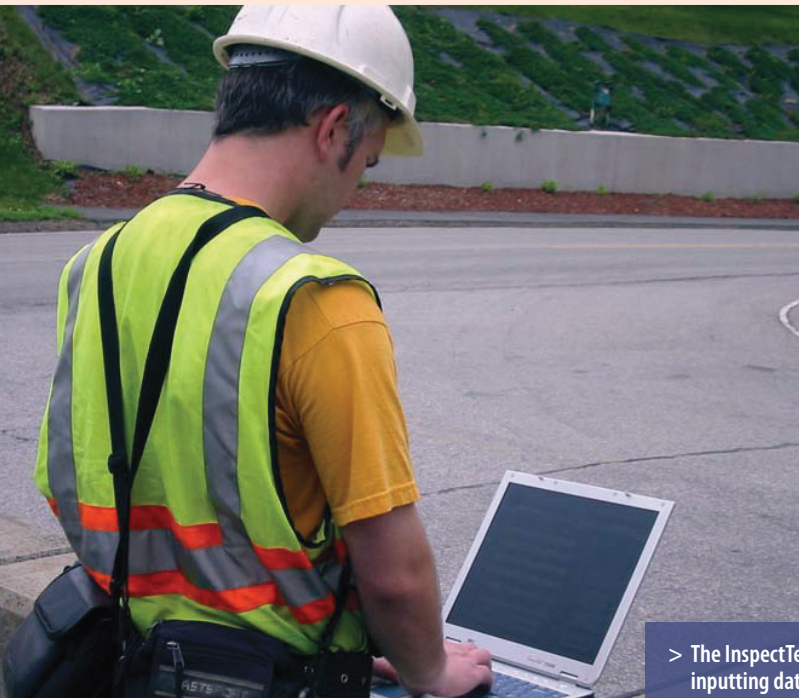


> Embracing new technology allows us to help clients efficiently manage and maintain their assets.

InspectTech has developed advanced modules for large bridges that allow full 3-D visualization. Users can click on individual members to see properties, pictures, ratings and history as well as interactively fly-through zooming in and out of the structure. Search results can be visualized on the model (i.e., show all gusset plates in fair or poor condition—the gusset plates matching would be shown in red and all other elements in black). This unique incorporation of Revit 3-D structural modeling is referred to as Bridge Information Modeling (BrIM), which is similar in concept to Building Information Modeling (BIM) but applied to bridge structures. HDR has recently proposed using this technique on the Bayonne Bridge Design-Build Project, in association with InspectTech.

HDR embraces new technology to help our clients efficiently inspect and manage their infrastructure assets. Our goal is to enhance mobility through the selective application of targeted advances in technology. Partnering with professional software developers, such as InspectTech, thoroughly enhances this process by providing efficient and practical solutions to inspection and asset management issues. ->

For more about Brian Leshko, P.E., visit our Highway Thought Leaders page at HDRinc.com/thoughtleaders-hwy



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