

PHASE I LIMITATIONS

- The current system is only based on two DOTs, hence, is limited in scope and bridge types;
- Only two bridge managers studied, hence, the ontology for bridge management is not comprehensive;
- Since we only focused on bridge structural inspection monitoring, the application of CRS technologies is not fully realized.

TECHNICAL PLANNING

- IRSV System Hardware Design
 - Viewport approaches – multiple screen (manager’s meeting) vs. duo-screen (operator)
 - Hardware requirement – graphic card
 - Customization – scalable system
- IRSV Software Design
 - Data annotations
 - Data display
 - Data integration
- Flyover for new construction monitoring (for a single bridge)
 - Image alignment
 - Construction process

TECHNICAL PLANNING

- Image Processing (AMBIS)
 - Damage detection
 - Feature identification (signs, debris, channel width, vegetation)
 - Feature quantification
- Knowledge modeling
 - Investigate rhetoric of universal vs. customized modeling approaches
 - Data integration between all data sources

TECHNICAL PLANNING

- LiDAR for large deformation analysis
- IRSV System Demonstration - NCDOT - Raleigh and CDOT
- Michigan bridge study - infrared + LiDAR
- Working with AASHTO to conduct national surveys for IRSV system design qualification
- Report-writing and publications