

AASHTOWare Bridge Management (BrM) Task Force Meeting Minutes
June 11 -12, 2013
Seattle, WA

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Meeting of the AASHTOWare Bridge Management Task Force

Date: June 11 - 12, 2013

Participants:

<u>AASHTO</u>	Judy Skeen Jan Edwards	Project Manager Program Director	Bridge AASHTOWare
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<u>BrDR Task Force</u>	Tim Armbrecht Jeff Olsen Bryan Silvis Todd Thompson	Illinois DOT Montana DOT Virginia DOT South Dakota DOT	Chair
<u>BrM Task Force</u>	Mike Johnson Eric Christie Mark Faulhaber Bruce Novakovich Wade Casey	CalTrans Alabama DOT Kentucky TC Oregon DOT FHWA Liaison	Vice Chair
<u>BrM Contractor</u>	Jeremy Shaffer Anthony Hutskow Josh Lang	Bentley Systems, Inc. Bentley Systems, Inc. Bentley Systems, Inc.	



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Introduction / Review Past Minutes / Determine Note Taker

Meeting called to order at 8:00am.

Project Manager advised that during the project manager's agenda item we need to discuss the details of an agency's BrM implementation project, and should discuss and make decisions on five recent BrM requests from international organizations.

No other changes were made to the agenda. The minutes from the April Task Force meeting (Ft. Worth, TX) were reviewed and approved with minor changes.

Pontis 5.1.3 Update & Discussion

The Contractor started by explaining a bug found while testing the hot fix for 5.1.3. The coding guide supplies caps for certain fields...Vertical and horizontal clearance caps at 99.99 for example. Pontis 5.X does not have those caps as assumed; however Pontis 4.X does. The problem comes when you generate the tape. What happens...it combines all numbers into one. If you have 1145.00 M -> it submits to the Feds as 1145, which translates to 11.45. This seemed to affect every field that has a cap. If you have an inspector that puts in 100 M, you are submitting to the government 10M. This can be a significant issue if inspectors are entering numbers higher than the cap. The question: do we want to add a fix for this into 5.1.3? The Contractor will fix this in 5.2.1 regardless. The general sense seemed to be the sooner the better, and might as well be a part of the hot fix. The approach from the Contractor would be rewriting the tape generation and putting into the 5.1.3 code. Use this as a jumping off point in 5.1.3. The 4.X versions did not allow users to go over the cap. If you use any version of 5.X you can have bad data.

The Contractor can intercept on the tape generation side. The urgency is there. The validation is very, very sensitive. One suggestion was connecting 4.X and 5.X and comparing the results. We would need to put multiple resources on it. The Contractor believes they can handle this issue in 2-3 weeks. Recommend FHWA to give us a large data set. We need to test the cases when the data is out of bounds. We'll need to do some manual validation. The Contractor would only touch the NBI TAPE EXPORT.

The good news: If a state is entering data correctly – according to the coding guide, the software is working correctly and there is no issue. If you are entering information incorrectly, the software could be coding it wrong.

Post Meeting Update: to limit the effect on schedule, to retain old functionality, and limit bringing on new bugs, the C++ DLLs were updated, rather than re-written. Testing is now in progress.

Project Budget Update / Customer Support Stats / Service Unit Updates & License Revenue

The Contractor provided an overview the FY12 MSE contract expired March 31, 2013. Discussion followed about the funds remaining in the FY13 MSE budget as of the end of May 2013. The FY14 MSE contract will begin July 1, 2013.



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Customer support hours – 27 hours of support was used by a DOT in May to work to resolve issues related to user authentication. The issue ended up being a Microsoft-related issue. Nothing else really stood out.

An updated service unit report was provided to the Task Force. Service Unit status reports were sent out to all agencies in June. The Contractor received several positive responses about notifying the State directly of the remaining units.

FHWA Update

Federal Highway Administration - Update on Bridge Management Issues and FHWA Initiatives (last meeting Ft. Worth, TX April 16, 2013, this meeting June 11, 2013 meeting)

Transitions/Recruitments. Team Leader for Infrastructure Management at TFHRC was replaced.

NBI Coding Guide. NBICGU Team has completed work on the Geometric Data Section, Navigation Section and Functional Description section at our May 21 – 23, 2013 meeting. Review comments due back from T-18 on June 14, 2013. Remaining sections include: a) Condition Ratings; b) Inspection Data & Frequency; c) Load and Load Rating; and d) Appraisal Section(s).

AASHTO Manual for Bridge Element Inspection. Ballot item for the AASHTO Manual for Bridge Element Inspection will be considered at the June 2013, AASHTO SCOBS meeting. AASHTO SCOBS will vote on the ballot item for the revised manual on Thursday June 20, 2013. If it is approved by the full committee, FHWA will then reference this document in our pending Specification for the NBI Bridge Elements.

Specification for the NBI Bridge Elements. We are awaiting T-18 and AASHTO SCOBS full committee action on approving the revised AASHTO Manual for Bridge Element Inspection. Memorandum on Specifications for the NBI bridge elements is being drafted for release sometime this summer.

Collection of Element Level Inspection Data. Pending the outcome on the AASHTO SCOBS full committee vote, another memo will be provided sometime this summer to promulgate the Specification for the NBI Bridge Elements to the states and Federal agencies.

Element data collection for non-NHS bridges. As required by MAP-21, FHWA will conduct a study on benefits, cost-effectiveness, and feasibility of requiring collection of element level data for bridges not on the National Highway System (NHS) and submit a report on the results of the study to the House T&I and Senate E&PW Committees. The project will use contractor services via TFHRC to issue a questionnaire regarding current ELBI practices, compile and analyze responses to the questionnaire, and develop a report summarizing the contractor's assessment of the benefits, cost-effectiveness, and feasibility of requiring element level data for non-NHS highway bridges.

Bridge Management Questionnaire: Information has been compiled 44 states with revised answers and 8 states comments remain unchanged.



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National Bridge Management Business Plan and Roadmap. Nothing new to report.

NHI Bridge Management Course Series: A task order proposal request (TOPR) was advertised and we are reviewing and evaluating the technical merits of each proposal.

Bridge Management Case Study: Nothing new to report.

Bridge Management Minimum Requirements: NPRM slated for release sometime in the fall of 2013 along with other NPRMs for planning and performance.

National Tunnel Inspection Standards: Nothing new to report.

National Bridge Inspection Standards: Heads up, a Federal Register notice requesting public comment on the process FHWA utilizes to assess State's compliance with the NBIS was published on June 7, 2013. This notice, Document 2013-13526, was developed in accordance with Section 1111 of MAP-21 (23 U.S.C. 144(h)(3)(A)(i)) which requires the Secretary to consult with states, federal agencies and other interested parties on procedures to conduct NBIS reviews. As you are well aware, FHWA implemented a risk based, data driven NBIS assessment process in 2011 and updated the metrics based upon recommendations from Divisions and the joint FHWA/AASHTO task force. FHWA anticipates continuing to use the risk based, data driven process and will consider the comments received for possible improvements to the process. Both the public inspection list and the official publication for this document can be found at: <http://www.archives.gov/federal-register/>. Or <http://www.gpo.gov/fdsys/pkg/FR-2013-06-07/pdf/2013-13526.pdf>. July 8, 2013 is the deadline for comments.

Long Term Bridge Performance Program

The LTBP has prepared two draft TechBriefs for review by State reps with comments due by July 8, 2013. Specifically these are:

- LTBP Bridge Performance Primer TechBrief
- LTBP Industry Day TechBrief

Data Collection

1. The LTBP program began long-term data collection in March 2013 in the Mid-Atlantic States with two initial bridge type clusters—a steel multi-girder bridge cluster and a prestressed concrete multi-girder bridge cluster.
2. LTBP staff and Contractor met with State Coordinators and their colleagues in the Gulf States (AR, AL, FL, LA, MS, and TX) in February 2013
3. LTBP staff and Contractor met with State Coordinators and their colleagues in the Northwestern (WA and OR) and Southwestern (CA, AZ, and NV) U.S. in March 2013.
4. LTBP staff and Contractor plan to meet with State Coordinators and their colleagues in the “Music States” (TN, KY, IN, OH, GA, SC, and NC) region of the U.S. in April, 2013.

Senate Hearing In the Wake of Interstate Bridge Collapse, Murray to Hold Hearing on Crumbling Infrastructure and the Need for Federal Investments in Highways and Bridges.



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Jun 04 2013 press release

NEXT WEEK: As Chairman of Transportation Appropriations Subcommittee, Murray will question top DOT officials on I-5 bridge collapse, the current condition of bridges and infrastructure, and the investments necessary to improve conditions nationwide. Today, U.S. Senator Patty Murray, Chairman of the Senate Transportation Appropriations Subcommittee, announced that she will hold a hearing on **THURSDAY, June 13th at 10:00 AM EST/7:00 PST** to assess our nation's infrastructure challenges and what they mean for the safety, economic competitiveness, and future of state and local transportation systems. The hearing comes just weeks after a four lane interstate bridge spanning the Skagit River in Mount Vernon, WA collapsed.

WHO: Senator Patty Murray (D-WA); Polly Trottenberg, Under Secretary for Policy, Department of Transportation; **Victor M. Mendez**, Administrator, Federal Highway Administration

WHAT: Crumbling Infrastructure: Examining the Challenges of our Outdated and Overburdened Highways and Bridges

WHERE: Dirksen Senate Office Building – Room 124

WHEN: Thursday, June 13th, 2013; **10:00 AM EST/7:00 AM PST**

This hearing will be [webcast](#).

Permalink: <http://www.murray.senate.gov/public/index.cfm/2013/6/in-the-wake-of-interstate-bridge-collapse-murray-to-hold-hearing-on-crumbling-infrastructure-and-the-need-for-federal-investments-in-highways-and-bridges>

API Update & Discussion

Work on the API has not yet begun. Higher priority tasks are currently taking priority for staff time. The framework for the application code to interface with the database tables is underway. The database structure will need to be revised to incorporate the new elements. New tasks tying into the database will be easier to incorporate once the API is complete.

5.2.1 will include only minor API capabilities available. The API will aide the Contractor's development in allowing new programmers to get up to speed faster.

Security – Agenda item 2013-BrM-17 – Many of the items identified in the security scans have already been fixed in the 5.2.1 code. The fixes were minor and took less effort to make the fix than the effort that would have been taken to develop estimates. Overall, any remaining security issues left unfixed are minor / low risk and out of our control.

User Group Planning Session

A Task Force member presented agenda recommendations received to date. The group was provided a skeleton User Group Meeting agenda for consideration in pulling the draft agenda together. Potential topics were discussed and recommendations were made on what to be included in the final agenda.

One potential topic was an interactive presentation of 5.2.1, where the Contractor walks through the software and demos particular changes/updates, etc. Maybe 45 minutes of demo time and 30 to 45 minutes of open questions.



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Google Maps Progress, Demo & Discussion

The Contractor secured a quote from a Google Maps reseller to acquire an annual license for the Google Maps API for Business product. AASHTO forwarded the check request to move the procurement forward to accounting. The check was mailed.

The Contractor then provided an overview of the Google Maps features incorporated into BrM software. Bridges stored in the database with invalid coordinates will be 'tagged' to alert the user that the bridge needs to be mapped. The bridge location can then be moved to the correct location and the coordinate data updated in the database.

New Element Database Structure Discussion / Estimate

Overview:

5.2 must support recording

- Existing and new elements
- New protective systems elements
- New defects
- New Element-level models

Database improvement opportunities exist
Pontis 4 support can be eliminated

Enhancements:

- Standardized numbering
- Standard element classes – NBE, BME, ADE
- Standard element major categories – superstructure, substructure, etc.
- Standard element categories
- History of element inventory (Phase 2)
- Ongoing inspection element condition

Element inventory will allow all elements on a bridge to be stored at points in time data on conditional states. Self-referencing keys will be established between BASE element and its protective systems. Removing BASE element for whatever reason cleans up related protective systems. Combinations of BASE element type and appropriate protective systems controlled through database XREF tables.

Element condition will be stored for 1:N inspections per element inventory entry and bridge inspection. Element normalization will be used to store only state quantities. State percentages will be calculated. Overall element quantity will be stored as an inventory item.

Defects will be stored in a separate table. Exactly the same data will be stored for all types of defects. Element condition data will be stored in a hierarchical manner.

The Contractor summarized the database changes with an overview of the impacts to the various database tables and the associated benefits that will be gained with the implementation of the changes. Sub-Consultants have weighed-in on the proposed database re-design and are on the same page with regard to how to proceed with the database structure.

Including the inventory table in Phase 1 would delay the delivery one month due to the extensive amount of testing that would be necessary. The AASHTO Manual with the new elements will likely be



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published early in calendar year 2014. The Task Force made the decision to discuss implementation timelines with the user community next week at SCOBS. The decision on the timing of the database changes will be made based on the responses received. The new database structure presentation should also be presented to the full TRT to get their feedback on the direction.

AASHTO Project Manager Report

2013 BrM User Group Meeting Update – Eighteen attendees are currently registered. Reminder updates will be sent out as the meeting dates approach.

2013 BrM User Survey – Copies of the user survey developed for 2012 were provided. The 2013 survey needs to be developed and finalized prior to August 5 (date six weeks prior to the User Group Meeting) in order to get the survey out, responses received, and summary PowerPoint developed for presentation during the User Group meeting.

It is important to keep these questions related to Task Force communication to the user community consistent from year to year (i.e., 2012 survey question 23, 24, and 26). Consistent questions year to year will allow us to track trends over time.

Quarterly communication going forward will be posted on the AASHTOWare website. Email communiques to the user community will include the URL link to the location on the AASHTOWare website.

An Agency's Development Work with the Contractor – As a new BrM licensee, this agency has defined a two phase project to support the successful implementation of AASHTOWare Bridge Management into their environment. They currently have AASHTOWare BrM service units on account. They anticipate that these service units will support approximately half of their defined needs. Phase I of their project will focus on the development of an interface to work in concert with their asset management system. Phase II of their project will focus on the configuration of BrM to support their specific needs and provide user training. The configuration requirements will not affect any changes to the core product.

Requests from International Organizations -

Organization #1 Evaluating integrated Bridge Management Systems. Request for a BrM evaluation license.
Organization #2 Interested in 'surveying' bridge conditions using BrM. Request to download BrM.
Organization #3 Request for an evaluation copy of BrM. Question on the restrictions applicable to non-member agencies or enterprises..
Organization #4



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Request for technical and cost information for BrM and see if it is possible to obtain an evaluation version to better understand its functionality, its ease of use and possible customization to their needs.

Organization #5

Researcher currently working on the improvements of highway structure management.

The organization's Government does not have complex management software such as AASHTOWare Bridge Management (BrM) Software. Organization would like to introduce the software to officials as a case study to improve structure management.

The Organization has gathered basic features of the software through the web pages but could not find information on its actual usage. Requesting information regarding the use BrM.

1. Some screenshots of actual software use
2. List of essential data that are used in the software

The Task Force discussed potential IP issues and the fact that we don't have sufficient staff resources to support BrM software evaluation and educational licenses internationally.

The Task Force made the decision to not license the product internationally other than to AASHTO members or associate members. We are in a transition period where we need to focus on the completion of the development of BrM 5.2. We may revisit this decision following the delivery of 5.2.3.

Utility Functions Update & Demo

This agenda item was deferred.

TAG Discussion (Possible Onsite Visit for Beta Testing)

The Task Force authorized some TAG members to be brought to the Bentley offices in Pittsburgh to perform beta testing prior to the release of 5.2.1. The timing for the beta testing will be confirmed after the decisions have been made on what will be delivered with 5.2.1

5.2.2 Progress and Discussion

The Task Force discussed options on how to move forward with the recently identified bug hot-fix, database changes, element manual changes, and the incorporation of added 5.2 functionality, such as deterioration modeling. The database revisions will have a ripple effect on other processes. Deterioration modeling cannot be incorporated until the database changes are made; however, there is an advantage in defining the specific details of the new database structure and ensuring those changes can support the needs for deterioration calculations. The Contractor will provide a sub-consultant with the proposed data structure to be used as the basis for deterioration model development.



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Decision: For the development of 5.2.1, the current database structure will be used as an interim solution to support the new elements that will be approved next week at the SCOBS meeting. Deterioration Modeling and database structure finalization would be performed in an iterative fashion. The database structure will be open to change as 5.2 development progresses.

Agencies will need to be provided with the opportunity to decide whether or not they will collect defects or not. Basic migration scripts will need to be developed to allow users to migrate their data from old versions of BrM to 5.2 versions.

A sub-consultant will continue the development of the project tracking processes to ensure they are delivered to the Contractor for coding. Navigation is the most important component of project tracking. The three-pane approach is not intuitive. Focus on project list, project content, and project analysis.

Priority Activities:

1. NBE Tape Re-write (to hot-fix recently discovered bug)
2. NBE Basic Revisions

New Reports and TRT Task 5 Part 2 (cleanup of actions)

TRT Task 2, enhanced Bridge Analysis Groups use case

API Part 1 Cross Browser Capability

API Part 2 Comprehensive API

Validation Re-write

Sufficiency Rating/SDFO Re-write

We need to improve the output of the software in addition to making improvements to the business processes. The inclusion of upgraded reports discussed earlier in the meeting would be beneficial to the user community. The Contractor would like direction from the TRT (for the user perspective) on what should be included in the reports. A sub-consultant agreed to develop draft reports for the Task Force to consider (Network level risks integrated with utility functions report and bridge level risk report). These reports will be needed sooner than later.

Discussion on the issue of the NBI submittal for elements will be delayed for now.

Contractor's Hiring Plan

Four members have been added to the team over the past year. The Contractor is continuing to recruit potential candidates for the team. All potential candidates are required to take a comprehensive technical abilities test prior to bringing them on board. The job market for the skill set the Contractor needs is very competitive.

The Contractor would like to add new members to the BrM development team. There are no AASHTO issues with off-shore employees as long as they meet the requirements set forth in E-Verify. The Task Force supports/approves adding new candidates requested by the Contractor to the team.



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Marketing Update

- The Contractor submitted an abstract to present BrM at the New York City bridge conference August 26-27. The Contractor is also sponsoring a booth at this conference.
- At the appropriate time, a Task Force member will pursue securing a speaking opportunity at the National Bridge Preservation Conference in Orlando, FL in April, 2014.
- The Contractor has a follow-up call with a DOT to discuss their progress on moving forward with BrM utilization in their agency.
- A TRT webinar on proposed database changes will be set up for June 26. (the June 19 TRT call will be canceled).
- An end user webinar will be set up for July (5.1.3 overview to include a ½ hour demonstration and information on the hot-fix).
- A Roads and Bridges webinar will be set up for November (5.2.1 overview – consider having the presentation be given by a DOT representative).

Task Force Executive Session

The meeting adjourned at 5:00pm.

Upcoming Task Force Meetings

SCOBs – Portland, OR	June 16 – 20, 2013
BrDR User Group – Virginia Beach, VA	August 6-7, 2013
BrDR Task Force – Virginia Beach, VA	August 8, 2013
IHEEP 2013 – Overland Park, KS	September 8 – 11, 2013
Long Term Bridge Performance Meeting	September, 2013 TBD
BrM User Group – Portland, OR	September 17-18, 2013
BrM Task Force – Portland, OR	September 19, 2013
Bridge Task Force – Brooklyn, NY	November 5 – 7, 2013
TRB – Washington, D.C.	January 13 – 17, 2014
Bridge Task Force – Destin, FL	January 28 – 30, 2014
AASHTOWare Task Force Chairs – Tampa, FL	March 5 – 7, 2014
Bridge Task Force – San Francisco, CA	April 8 – 10, 2014
2014 National Bridge Preservation Conf – Orlando, FL	April 21 - 25, 2014
AASHTO IS – Bismarck, ND	May 4 – 7, 2014
Bridge Task Force – Portland, ME	June 10 – 12, 2014
SCOBs – Columbus, OH	June 22 – 27, 2014
BrDR User Group - TBD	August, 2014 TBD
BrM User Group – Rapid City, SD	September 16 – 17, 2014
IHEEP 2014 – New Orleans, LA	Sep 28 – Oct 2, 2014
Bridge Task Force – Charleston, SC	October 28 – 30, 2014



Attachment A: Listing of AASHTOWare Bridge Task Force, TAG and User Group Personnel

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