Summary Minutes Of The

AASHTO Virtis Opis Task Force Meeting

August 4, 2011 Helena, Montana

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General Information – Meeting of the BRIDGEWare Task Force

Date: Thursday, August 4, 2011
Participants:

BRIDGEWare Task Force

BRIDGEWare Chair	Tim Armbrecht	Illinois DOT
V/O Task Force	Dean Teal	Kansas DOT
	Bryan Silvis	Virginia DOT
	Amjad Waheed	Ohio DOT
	Tom Saad	FHWA Liaison, Midwest Resource Center
Contractor	Jim Duray	Baker
	Herman Lee	Baker
	Krisha Kennelly	Baker

Note Taker: Bryan Silvis

General Discussion

None.

User Group

Discussion

The Task Force shared comments and impressions from the meeting which were generally good from the User Group including new attendees. The arrangements (accommodations), agenda and training were well received. Individual User Group comments included that the training was a good means to get going and that the Task Force portrayed they were clearly behind the product during presentations. The Task Force felt they did a good overall job of promoting the TAG.

The following particulars were discussed:

The Contractor discussed a developer's request to get developer information in a timely fashion. Developers were sent a kit at Beta 2 and a second in June. Developers were sent notice of the required change to one of the functions in the API that the developer had an issue with. 32 bit is not compatible with the 64 bit install and the Contractor will look into whether they can coexist so the developer's software can work for either.

The Task Force is agreeable to meeting with 3rd party Developers during the interim Task Force meeting held the day after the User Group meeting concludes. The additional session would be open to new 3rd parties, but the Task Force is looking for the States to take initiative on recruiting them. A training session for 3rd parties has been given at past User Group meetings (e.g. Alabama). The training session would not likely be of benefit to existing 3rd parties, but would be helpful to new ones and is under consideration.

Dean's work to develop a Virtis/Opis User Group forum, discussed during the VOBUG meeting, was received as a good communications tool. A Moderator will need to be determined once the site is up and running.

Bryan Silvis (Virginia DOT) participated in the Opis training and the Opis Business meeting. He anticipates an enhancement request for the PS shear stirrup design tool to transfer the stirrup spacing results into a more plan ready format. There was significant discussion on developing the "Opis as a design tool" enhancement. The Opis group created a number for a new enhancement to include in voting that focused on one part of the overall enhancement (prestressed beams).

Based on the continued high ranking of the "Opis as a design tool" enhancement, the Task Force instructed the Contractor to develop a full estimate broken down into components.

The Contractor discussed the ongoing need to migrate portions of the existing code from C++ to .NET. Adding a supplement fixed price task to the existing work plan and a fixed price task to future work plans was suggested as a means to accomplish the work over time. At past meetings, migrating portions of the code was suggested as a possible means to increase performance. The Task Force supported this initiative.

The Contractor questioned whether 4 hour fundamentals training should continue to be provided at future User Group meetings. Currently, the two-day training usually provided to Users is crunched down

into four hours. The training also conflicts with participants desires to attend concurrent presentations and attendance fluctuates.

Alternatives suggested included:

1. Decrease the session time and provide more general training
2. Increase the session time
3. Provide fundamentals training on Monday afternoon
4. Record fundamentals training and issue to all registrants if release is on time
5. Record fundamentals training and make available on-line similar to tutorials.

Providing fundamentals training on Monday afternoon would have logistical problems for attendees traveling long distances and for those with delayed flights.

Brainstorming session

The Task Force will distribute the results of the brainstorming session. There were 33 responses and the Task Force will assess whether everyone responded once the attendee list is forwarded. Results were more evenly distributed this year and the higher ranked items were reviewed.

Opis as a design tool received 11 votes which is likely reflective of the number of Opis licensees. Frame analysis has been rated high twice. Adding more fields to the Bridge Explorer was highly ranked and includes turning fields on and off, reordering based on the selected field and the ability to add additional fields.

Concrete arches received a high ranking, but there was uncertainty on whether votes were cast for culverts or arch bridges. Similarly, there was uncertainty whether frame analysis received votes for 3-sided culverts. GUI for trusses could translate existing truss commands into inputs in the windows at the same time. There was concern that the GUI changes to accomplish reduced input (a separate item) would expand back to the full input as State particular needs were added back.

The discussion on report compatibility included whether all reports can be cut and paste. Based on discussions during the Brainstorming session, it is also believed that Users desire the ability to copy content from Excel and paste into Virtis/Opis. This ability would involve particular windows and would need to be identified.

6.3 Release

General Discussion

Version 6.3 was released on time, but based on installs at the User Group meeting, it was uncertain whether the User Group had the opportunity to evaluate the new release.

Testing Discussion

The Contractor said the test suite of bridges forwarded by the TAG was very helpful during Alpha testing. The major hang-up, as discussed previously, was missing fields where defaults were used in the other engines and the AASHTO engines interpreted as missing data.

Version 6.4 will contain a number of enhancements that require significant work to test including Full 3D Analysis, R/C Slab System, Substructure Drilled Shaft Specification Check and the Culvert Engine (WisDOT) Development. As done successfully in the past, Dean will poll the TAG in these areas to ensure all areas are covered and tested thoroughly.

BRASS Culvert was identified as the primary software States were currently using. The Task Force directed the Contractor to develop an estimate for a BRASS Culvert import utility with the intent that States could continue use, if desired, and compare results to the AASHTO engine.

Discussion continued on whether the testing should be moved forward due to on-time release of Version 6.3 allowing more time for testing or pushed back allowing more time for development. A decision will be deferred to a later date when development has proceeded further (potentially the October or January meetings based on the Contractor's status report).

Service Pack

The Contractor presented a handout showing potential service pack enhancements and the fixed price items for the 6.4 release. The fixed price items are discussed under Agenda Item VO-03, 3a. Potential service pack enhancements were shown boxed in a red outline with suggested enhancements highlighted.

The Contractor asked whether resolved incidents should be included in the service pack and the Task Force reached consensus that they should if the submitters were willing to test for the patch. The incident involving compression capacity of counters was identified specifically for resolution in the service pack. The Task Force determined that the service pack release date should be set for September 30th and development should proceed for the highlighted items.

6.4 Release

Development status

The Contractor discussed the status of the fixed price items. Work on FP10 and FP17 is approximately 50 percent complete. Work on FP11 and FP14 has begun.

The conceptual approach for FP6, R/C Slab System, was released and comments received are under review. The Contractor is continuing to work on modeling for FP5, Full 3D analysis, before starting development.

Culvert – incorporate MBE LFR spec

The Contractor discussed the Planning Estimate to Implement LFR in Virtis/Opis Culvert. The Task Force supported adding LFR capability to the culvert module and the Contractor indicated they believed it could be added to the 6.4 Work Plan. The Task Force supported using Task Force directed funds as it would be used by and benefits all States.

The Task Force directed it should support cast-in-place and precast loading when asked by the Contractor. The Contractor will address TAG comments, revise mockups and include LFR with flow charts for distribution to the TAG. There was a discussion on whether the culvert module would be developed in one phase in the 6.4 release or in two phases in Versions 6.4 and 6.5. It was decided the culver module will be completed in a single phase and the Work Plan planning spreadsheet will be updated accordingly.

2011 spec updates

The Contractor confirmed that the 2011 specification updates would be the 6th Edition and not an Interim release. Tim indicated that rivet shear capacity was increased and needs to be addressed for gusset plate analysis.

The culvert engine development for 6.4 is currently based on rating per the current LRFD specifications. Tim Armbrecht will forward work on culvert rating in the likely hood that it will be incorporated into the MBE.

Other questions, mockups, etc.

There may be capacity to add some of the enhancements to the 6.4 release identified in the items considered for the service pack. Gusset Plate Analysis and Rating and LRFR for Nonstandard Gage Analysis were identified for potential inclusion. The Task Force deferred decision until the October meeting when better information for big ticket items will be known.

The Contractor confirmed with the Task Force that Sybase support will be dropped for 6.4, but support for SQL Server and Oracle will be continued.

Work Plan

FY 12 amendment

The FY12 amendment, including potential changes discussed above, will be deferred until the October meeting when the status of development, Contractor capacity and financial information is better known.

Comments on slab system

One of the TAG members provided in depth comments and mockups to the slab system concept. The Contractor asked whether the intent was to completely or partially address all comments received. The Task Force confirmed all comments should be addressed and incorporated where possible. As Kansas is providing the vast majority of the funding, any changes cannot compromise their original purpose in funding the enhancement. Dean Teal clarified the original intent as providing the slab system for non-standard gauge and modeling with the substructure. All Kansas slabs are integral with the pier requiring frame analysis for modeling with the substructure.

The Task Force/Contractor felt that the proposal to incorporate R/C slabs within Girder Systems so that girder systems that are widened with RC slabs could be modeled (one of two alternatives proposed in the introduction and further defined in Comment 3) may be possible and should be evaluated. Kansas' original purpose may be accomplished by defining the slab, multi-column pier and a check box for integral.

Comment 11, RC Slab Shape and Profile (Cross Section Width and Depth Variation) was identified as having implications for other State inventories. Kansas maintains a constant depth section. Virtis does not currently have a section defined with varying thickness.

In regards to Comment 12, Rebar Layout, Virtis cannot currently vary bar spacing in a flared section/strip.

The Task Force identified some of the comments to be specific needs for this TAG member.