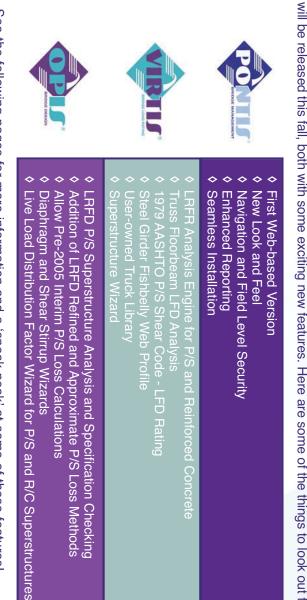


# Major Product Releases! New Features!

will be released this fall, both with some exciting new features. Here are some of the things to look out for: Releases for all BRIDGEWare® products are planned soon! Pontis® 5.1 will be released this summer and Virtis®/Opis® 6.1



See the following pages for more information and a 'sneak peak' at some of these features

# Pontis<sup>®</sup> 5.1 (July 2009)

Pontis<sup>®</sup> 5.1 is the first release of a web-based version of the software. Some of the new and enhanced features include:

# ♦ First Web-based Version

Pontis<sup>®</sup> 5.1 can be installed to access an agency database and viewed from Microsoft Internet Explorer on any computer.

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## <u>Message from the Chair</u> BRIDGEWare<sup>®</sup> Task Force Management Changes

It has been an incredibly busy time for the BRIDGEWare® Task Force and Contractor with the upcoming releases of Pontis® 5.1 and Virtis®/Opis® 6.1 and the ongoing design work for Pontis® 5.2. The amount of work that has been performed by volunteers from various transportation agencies is almost incomprehensible. The strength of AASHTOWare® is truly found in its members – thank you!

Thanks are especially due to the volunteers who have spent countless hours performing the acceptance testing of both Pontis<sup>®</sup> 5.1 and Virtis<sup>®</sup>/Opis<sup>®</sup> 6.1. Without you, cooperative software development does not work. I cannot thank you enough for your effort and perseverance.

I wish it were not so, but it is true that "all good things must come to an end". Todd Thompson has ended his BRIDGEWare® Task Force tenure as of June 30, 2009. Todd has been very active with Pontis®, Virtis® and Opis® for many years – to list everything he has done while on the Task Force would fill this entire newsletter. Let me simply say that all three of the BRIDGEWare® products and the BRIDGEWare® community as a whole are better because of his involvement.

Continued on page 6





# Pontis® 5.1 – continued from page 1

### ♦ New Look and Feel

information on the screens is improved, and NBI items are color coded for easy identification. The bridge list has been improved, and a bridge preview has been added to allow quick review of bridge photos and a concise and readily available summary of information for Condition, The inspection module has been rearranged to make it easier for the user to view and access the data. Grouping đ

# ♦ Navigation and Field Level Security

Load Rating, Inventory, Schedule, etc.

System administrators can quickly and easily modify user configurations for displaying the forms and text.

### ♦ Enhanced Reporting

Pontis<sup>®</sup> 5.1 has been enhanced to use Crystal Reports as the reporting tool.

### ♦ Seamless Installation

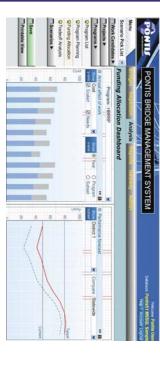
As a web-based system, the newest version of Pontis® can be deployed and updated seamlessly. Pontis® provides an alternate installation for agencies that prefer a desktop application.

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# Pontis® Future Releases

AASHTO's BRIDGEWare® Task Force is nearing completion of the design documents for release 5.2 of Pontis®, its bridge management system software product. Pontis® 5.2 is a complete overhaul of the system which was first launched in 1989.

"When Pontis<sup>®</sup> was first designed, bridge management was brand new, and everyone was learning how to plan work using forecasting models for determining both proactive maintenance and improvement projects. We've learned a lot over the years, what works and what doesn't, and we are developing a more realistic product," said Dennis O'Shea, Vice Chair of the BRIDGEWare<sup>®</sup> Task Force, who leads the Pontis<sup>®</sup> effort.



Pontis<sup>®</sup> 5.2 will maintain its flagship element inspection process, which was converted to an internet-based system in the 2009 release of Pontis<sup>®</sup> 5.1. It will also preserve many of the data closely related to the inspection process, such as inspector work candidates and Markovian deterioration models.

A goal of the new system is to ease the upgrade process while providing a better fit for today's bridge management paradigm. The workflow of the system has been revamped to improve the distribution of information to the right people at the right time.

- Among the innovations in the new release will be:
- Breaking out project development as a distinct activity between maintenance planning and programming, giving much stronger support for designing preventive maintenance projects covering large groups of bridges.
- Making the development and use of the deterioration and cost models easier and more accurate, with less data entry and a better link to systems many agencies already have, such as maintenance management.
- Incorporating risk management to help agencies perform routine risk assessments that feed into project planning and programming.
- More powerful and flexible features to define bridge activities and tailor them to specific agencies, including more accurate improvement and replacement actions for bridges and culverts.
- Better use of graphics to help communicate the costs and benefits of a project.

Continued on page 5





# Virtis® 6.1 (Fall 2009)

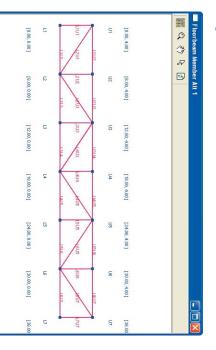
Virtis<sup>®</sup> 6.1 is currently in the beta testing phase and is scheduled for release this fall. This release includes the following enhancements:

### $\diamond$ Virtis® LRFR Analysis Engine for P/S and **Reinforced Concrete**

concrete superstructures. provides another LRFR analysis module in addition to BRASS for load rating prestressed and reinforced superstructure analysis engine. This enhancement specifications has been added to the Opis® LRFD concrete superstructures according to the LRFR The ability to rate prestressed and reinforced

### $\diamond$ Virtis<sup>®</sup> Truss Floorbeam LFD Analysis

guidance for this enhancement. New York DOT for providing funding and technical LFD. An alternative method can not be specified for doing shear ratings. Thanks to Alabama DOT and truss floorbeams so they can be analyzed with definition. This enhancement allows a user to create built-up floorbeams for a floor-system structure allowed for creating steel plate-girder, rolled, and system bridge analysis. Previously, Virtis® only floorbeams consisting of truss members in a floor This enhancement adds the ability to analyze



- $\diamond$ 1979 AASHTO P/S Shear Code - LFD Rating This enhancement allows the user to specify that the 1979 AASHTO P/S Shear Code should be used in the LFD rating.
- $\diamond$ Steel Girder Fishbelly Web Profile type (i.e. both circular or both parabolic). reverse parabolic but both curves must be the same plate girders. The curves can be reverse circular or (connected reverse curve depth variation) on steel Users will be able to define a fishbelly profile

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### $\diamond$ **User-owned Truck Library**

the standard vehicles delivered with the system and A user-owned vehicle library and additional access the agency vehicles that can be added by the agency. users to describe their own vehicles in addition to privileges were added. This enhancement allows

#### $\diamond$ Superstructure Wizard

for entering span lengths. A wizard was added to assist users in creating Superstructures and superstructure definitions and substructures (Opis<sup>®</sup>). relationships between superstructures. Superstructure Alternatives and defining the Superstructure window by removing the requirement This enhancement simplifies the existing

# Virtis<sup>®</sup> Future Releases

The following new features are planned for upcoming releases:

 $\diamond$ Analysis enhancements to trusses acting a main longitudinal members, and floorbeams

> $\diamond$  $\diamond$

Specifications

Enhancements to add more structure types for LRFR

Updates for AASHTO 2008 interim to the LRFD

- $\diamond$ Addition of new P/S concrete beam shapes to the
- $\diamond$ Addition of a new R/C slab system structure definition library and to the AASHTO LRFD/LRFR engines
- $\diamond \diamond$ Add Crystal Reports to the report tool
- Enhanced export/import for system data





## **Opis® 6.1 (Fall 2009)**

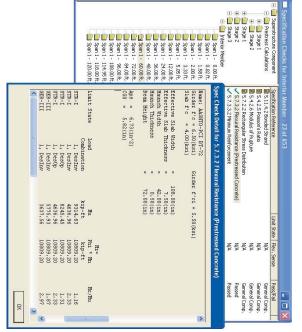
Opis® 6.1 is currently in the beta testing phase and is scheduled for release this fall. This release includes the following enhancements:

### LRFD P/S Superstructure Analysis and Specification Checking

 $\diamond$ 

The upcoming release of Opis® will include support for prestressed concrete superstructures by the AASHTO LRFD analysis module. The prestressed concrete module consists of the following major components:

- Export of Opis<sup>®</sup> data to create finite element models for analysis
- Export of dead loads to the finite element model
   Dead load analysis
- Computation of LRFD live load distribution factors
- Longitudinal live load analysis
- P/S loss calculations
- Capacities determined using the AASHTO LRFD Bridge Design Specifications, 4th Edition



♦ Allow LRFD Refined and Approximate P/S Loss Methods / Pre-2005 Interim P/S Loss Calculations

This enhancement added two options to Opis<sup>®</sup>. One option is to allow the user to select "AASHTO Refined" or "AASHTO Approximate" for the P/S loss computations. The other option allows the users to select the pre-2005 AASHTO refined method.

# ♦ Diaphragm and Shear Stirrup Wizards

The Diaphragm Wizard allows the user the option of inputting multiple diaphragm groups of equal spacing along a girder. The Shear Stirrup Wizard generates stirrups for prestressed concrete beams and reinforced concrete beams. The wizard allows for the input of multiple groups of stirrups with constant spacing along the length of a girder.

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# ♦ Live Load Distribution Factor Wizard

This enhancement added a new "Compute" button on the distribution factor dialog box for P/S and R/C superstructures.

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#### **Upis**<sup>®</sup> **Future Releases**

upcoming releases: The following new features are planned for

### $\diamond$ Specification Checking for Steel Multi-girder Superstructure

comprised of rolled beams and welded plate girders cross-section types to be supported are I-shapes non-standard gage (NSG) analysis module. The modules written for the substructure module and the beams. The module will rely heavily on existing export module will be modified to compute dead load, checking for steel multi-girder superstructures. The engine will be enhanced to perform specification live load and LRFD distribution factors for steel The new AASHTO LRFD specification checking

#### $\diamond$ LRFR Enhancements

girder steel superstructures in the spec-check module. The new release will include LRFR capabilities for multi-

### $\diamond$ Addition of LRFR Rating of Piers

drilled shafts. This will include the cap, columns, footings and

### Virtis<sup>®</sup>/Opis<sup>®</sup> Strategic Plan

### Product Functionality:

- by providing more user-friendly design features. Improve Opis<sup>®</sup> design capabilities to perform concrete and prestressed concrete superstructures automated design functions for steel, reinforced
- design and rating engines. Continue the implementation of alternate analysis.
- Provide user-requested enhancements to improve the existing usability of the product

#### Technology:

- migration of the BRIDGEWare® products to a new technical architecture. Pontis® for determining the best approach for Joint development of an implementation plan with
- computational jobs. deployment of updates and dispatching of Increased use of the internet for data exchange
- Improved management tools for the integrated database

### **Project Websites**

support, general information, helpful links to other websites (including the customer support centers) and access to an end user mailing list. The mailing list provides end users an opportunity to be e-mailed product news. Project websites contain additional information about BRIDGEWare® products, including access to technical

# http://pontis.bakerprojects.com/



### Pontis® Future Releases - continued from page N

important reasons to do bridge maintenance. Public combine multiple objectives for setting priorities and allocating money. The Task Force realizes that while it is expectations regarding bridge condition, risk and mobility important to minimize cost, there are other equally Tying this all together is a powerful new framework to

> network level objectives and give users realistic and achievable results," said Task Force member Scot consider all of these objectives. "We want to incorporate Becker of the Wisconsin Department of Transportation must also be satisfied. Pontis® 5.2 is being designed to

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# Message from the Chair

# BRIDGEWare® Task Force Management Changes - continued from page 1

With every ending, there is also a new beginning. Beckie Curtis began her term as the newest Task Force member starting July 1, 2009 and will serve as a Virtis® representative. Beckie presently serves as the Load Rating Engineer for the Michigan DOT. She brings a wealth of experience with load rating in general and with LRFR issues in particular. Please join me in welcoming Beckie to the Task Force.

Beginning on July 1, 2009, Dennis O'Shea assumed the position of BRIDGEWare® Task Force Chair. Dennis has been steady, calm and unflappable in his prior role as Vice Chair and an enormous help to me. He is thoughtful, insightful and able to simultaneously understand both the big and little pictures. BRIDGEWare® could not be in better hands.

blessing. Thank you for allowing me to serve in that capacity. with a group whose members exemplify expertise, dedication and professionalism. The many personal and professional relationships that I have made through BRIDGEWare® have been and continue to be a personal It has been an honor to hold the position of BRIDGEWare® Chair, and it has been my privilege to work so closely George H. Conner, AASHTO BRIDGEWare® Chair

	<ol> <li>8. Improving the software development process</li> <li>9. Facilitating third-party development</li> </ol>	7. Developing product technical architectures	<ol> <li>Supporting other related business processes</li> <li>Strengthening product integration</li> </ol>	4. Supporting asset management	3. Enhancing usability	2. Enhancing decision support capabilities	1. Preserving and expanding the license base	term plan for the BHIUGE ware <sup>®</sup> product suite. The long-term plan for these products includes:	Each year, the Task Force reviews and defines strategic	Strategic Direction Set
Hope to see you there!	james.fu@hawaii.gov Web Site: http://pontisusergroup.org/	Dates: September 23-24, 2009 Contact: James Fu (Hawaii DOT)	Location: Newport Beach Marriott Hotel & Spa Newport Beach, California	PUG 2009 – Pontis <sup>®</sup> User Group Conference	Web Site: http://vobug.org/		Dates: August 4-5, 2009 Contact: Darren Kemna (Missouri DOT)	Location: Loew's Hotel Denver, Colorado	VOBug 2009 – Virtis®/Opis® User Group Conference	Upcoming BRIDGEWare® User Group Meetings

# Contractor for BRIDGEWare® Development:

Moon Township, Fennsyrvana Email: <u>bridg</u>eware@mbakercorp.com 100 Airside Drive

Virtis/Opis Contact: James A. Duray, P.E. Pontis Contact: José L. Aldayuz Phone: 703-317-6522 Phone: 412-269-6410

Paul D. Thompson, Castle Rock, CO BridgeTech, Inc., Laramie, WY Subcontractors:

AASHTO BRIDGEWare® Task Force and Management Team Dennis O'Shea Task Force Chair	Force and Management Team Task Force Chair
Dean Teal	Virtis <sup>®</sup> /Opis <sup>®</sup> Task Force
Tim Armbrecht	Virtis <sup>®</sup> /Opis <sup>®</sup> Task Force
George Colgrove	Virtis <sup>®</sup> /Opis <sup>®</sup> Task Force
Beckie Curtis	Virtis <sup>®</sup> /Opis <sup>®</sup> Task Force
Tom Saad	FHWA Liaison - Virtis®/Opis®
Scot Becker	Pontis <sup>®</sup> Task Force
Paul Jensen	Pontis <sup>®</sup> Task Force
Mike Johnson	Pontis® Task Force
Wade Casey	FHWA Liaison - Pontis®
Dan Buhler	SCOJD Liaison - BRIDGEWare®
Doug Horton	T&AA Liaison - BRIDGEWare®