20th International Emme Users' Conference
Montreal, October 18 to 20, 2006

CALL FOR PAPERS

EMME/2 to GIS, Best Practices for Model Data Portability (Case Study from Lewis County, Washington)
Title of the paper

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BIOGRAPHICAL SUMMARY FOR MAIN AUTHOR (100 words mini-CV)

Mr. Hansen co-manages the GIS service center for Tetra Tech/KCM located in Stanwood, Washington. He has been applying GIS technologies to transportation, planning, and environmental projects for the past fourteen years, including twelve years of practice in the Puget Sound region. After working in a variety of senior consulting roles in the Seattle area, Mr. Hansen created TerraLogic GIS, Inc. in 1997 to offer geographic technology solutions to both public and private projects. In 2006, he brought TerraLogic to the Tetra Tech/KCM team to apply GIS to the company's expertise in engineering and planning applications.

AUDIOVISUAL SUPPORT NEEDED

(A PC with Office XP, a projector, and a microphone will be provided. Please mention any other needs.)

None

ABSTRACT (500 words)

In conjunction with Perteet Engineering, RST International (Robert Tung, PE), and JXR (Jin Ren, PE), Tetra Tech/KCM has been developing applications for the effective use of EMME/2 model output in the GIS environment. Our case study in 2005 (see 2005 UC proceedings, Seattle, Washington) included the development of procedures for conflating the EMME/2 link and node network to a GIS centerline file. Our latest step includes the development of a robust GIS centerline file built to receive a variety of model output data, as well as a suite of tools, accessible from a graphical user interface, to quickly upload and map the model information.

Our robust GIS centerline network uses standard GIS feature classes (points and lines) to receive EMME/2 model output data for mapping and further analysis in the GIS. In addition to an existing automobile road network (base year is 2004) conflated to the GIS road centerlines, we have expanded the network to receive volumes on centroid connectors (using grossly simplified lines), nodes representing intersections (turn movement data), and on proposed roads for future model years. The resulting unified model network built on GIS centerlines consolidates several layers of model output into a single road (line) layer and a single intersection (node) layer for direct comparisons of current and future travel and turn volumes.

The GIS integration objective is to ensure model information is quickly and easily transported to the GIS environment. Once attached to the GIS centerline network, the model data can be spatially analyzed, mapped, and used in combination with other GIS data, such as future land use and zoning. Our graphical user interface automates the preparation of model output data and assigns the data to the GIS centerline network. The tools parse tabular output in an EMME/2 batch-out file, move the data columns to a database table, and join the information to the GIS centerlines and nodes.

At this time we are expecting to integrate other modal link and node features into the GIS unified network, and expand our data loading applications into more sophisticated turn movement and trip analysis visual formats.

Please send the completed form to the attention of:

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