12TH ICCRTS
"Adapting C2 to the 21st Century"
GIS Enabled Modeling and Simulation (GEMS)
Modeling and Simulation, C2 Technologies and Systems, Interoperability
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Abstract:

Current C4ISR and simulation systems use different tools and formats for generating and storing geospatial information. C4ISR systems tend to use geographic information systems (GIS), such as C/JMTK, for this information, while simulation systems use proprietary terrain database formats that are generated from a number of different terrain database generation tools. This leads to problems sharing geospatial information between systems, making mission planning or embedded training difficult, as well as problems maintaining geospatial information as it is updated. A common geospatial database that can be generated with a single set of tools and shared across applications would eliminate these problems and allow higher integration of diverse military systems. Under a contract with the USArmy Topographic Engineering Center, MÄK Technologies, along with ESRI, is developing a prototype framework for accessing geospatial data from federated geospatial databases directly into M&S applications, utilizing the ESRI ArcGIS family of products. This paper will discuss our work to date and future plans.

Paper Outline:

Introduction
Terrain Database Representations in M&S Systems
Commonality of C4ISR and M&S Terrain
Requirements for C4ISR Terrain for M&S
Design of M&S API to GIS Terrain Data
Prototype of M&S API in C/JMTK
Conclusions and Future Work