

Tri-Service CADD/GIS Technology Center
Tri-Service Environmental Field Working Group
Tri-Service Project No. 97.022 (FY99 Effort)

Statement of Work
GMS/TSSDS Interface Development Design Document

1. **BACKGROUND:** Many users have existing databases containing field data from environmental sites. These same users may have several databases in different forms or may not have a functioning Geographic Information System (GIS) in place to utilize this data. An interface is needed, therefore, to allow extraction of field data from a database and load it into the Department of Defense Ground Water Modeling System (GMS) for modeling use. Such an interface would negate the need for double entry of data; once for the project database and once into GMS.

The Tri-Service Spatial Data Standards (TSSDS) provide a standardized schema for storage of spatial data, including environmental data. It is anticipated that new databases will use the TSSDS, while translators can be written to put data from existing databases into TSSDS-compliant form when necessary. With TSSDS as the standard schema, an interface can be written to extract data from the TSSDS schema for use in building input files for the models supported by GMS.

2. **OBJECTIVE:** Develop a design document that details the programming requirements to develop an interface between DoD's Groundwater Modeling System (GMS) and Tri-Service Spatial Data Standards (TSSDS)-compliant databases. Work shall be grouped in manageable tasks with associated cost estimates to allow for incremental funding if necessary.

3. **INTERFACE REQUIREMENTS:**

a. The goal is to ultimately populate all data fields necessary to perform modeling within GMS. At a minimum, the ability to import field data (e.g., x, y, z, stratigraphy data, water level, etc.) and their various attributes shall be accomplished. The current TSSDS data field tables, names and attributes will be provided by the Tri-Service CADD/GIS Technology Center (Bobby Carpenter, E-mail: carpenb@ex1.wes.army.mil, phone: 601-634-4572).

b. The interface shall use non-proprietary, database connectivity tools (e.g., ODBC drivers) to allow communication with a variety of different databases.

c. The interface shall be platform independent.

d. The interface shall allow seamless import of TSSDS-compliant data into the GMS.

e. The interface shall allow the user to select data either graphically or textually to be imported. For example, boreholes may be selected from a map detailing borehole locations or by entry of the borehole name in a form.

f. The interface shall allow the user to bring in point data from TSSDS, with multiple attributes. For instance, for contaminant concentration data the user shall be able to select data by date or range of dates, by contaminant, or by location. For borehole data, selection may be made by

g. Development/implementation of the interface will be staged to allow for incremental funding. The final report shall address implementation components and the cost for each component. The cost estimates shall reflect the requirement for testing of alpha and beta versions of the interface by the developer using populated databases to be provided by the government.

4. Deliverables

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|------------------------------------|----------------------------|
| a. Draft interface design document | 45 calendar days after NTP |
| b. Comments on draft document | 75 calendar days after NTP |
| c. Final interface design document | 95 calendar days after NTP |

The draft report shall identify available choices or alternatives that will optimize implementation and/or performance of the interface. These alternatives shall be described in sufficient detail to allow the Government to make an informed decision on alternative selection, and so the alternatives can be included in future scopes for development and implementation of the interface. Questions or anticipated implementation problems need to be identified along with the above alternatives and presented in the report.

The government shall have 30 calendar days to review the draft document. The government will attempt to address in the comments any design or implementation concerns identified in the draft document.

The final report shall incorporate Government comments to the fullest extent possible. Unincorporated comments shall be included in an appendix to the report with an explanation as to why the comment was not incorporated.

One conference call shall be scheduled to discuss comments on the draft deliverable.

5. **Tri-Service CADD/GIS Technology Center Point-of-Contact (POC).** Mr. Bobby Carpenter, Tri-Service Center, (phone 601-634-4572; E-mail: carpenb@wes.army.mil) will be the Tri-Service Center POC for this delivery order. The Contractor shall submit one electronic copy (on 3.5-inch diskette or via E-mail) and a minimum of 15 stapled or bound paper copies of the draft and final deliverables, at the time intervals indicated in paragraph 4, by mail to the Tri-Service Center POC at:

Tri-Service CADD/GIS Technology Center
U.S. Army Engineer Research and Development Center
Waterways Experiment Station
ATTN: CEWES-ID-C (Bobby Carpenter)
Building 8000, Room 1119
3909 Halls Ferry Road
Vicksburg, MS 39180-6199

Electronic submittals of text files (e.g., the report) shall be provided in Microsoft Word (Word 97 or earlier) electronic format, and ".PDF" (Adobe Acrobat Reader 3.0 or earlier) electronic format.