

Gilsenan, Michael

From: Raffo, Barbara (ex)
Sent: Thursday, June 20, 2002 5:15 PM
To: Gilsenan, Michael (ex)
Subject: FW: Proposal for application and database work to support LMAQTF

Mike:

These are the guys who attended the Parks-Buildings Task Force, and collected the data from all the agencies. Apparently the funding to continue with this particular project is lacking. Is this something we want to look into? Please advise

From: Jim Hall[SMTP:jhall@plangraphics.com]
Sent: Thursday, June 20, 2002 3:02 PM
To: barbarar@dep.nyc.gov; bobrakate@aol.com
Subject: FW: Proposal for application and database work to support LMAQTF



LMAQTF_app_and_
db_scope-v.1.2....

Barbara - I sent this to Sam Benson in early May, but I think he's having trouble moving the effort forward.

Much thanks for any assistance that you can lend - Jim

Jim Hall
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-----Original Message-----

From: Jim Hall [<mailto:jhall@plangraphics.com>]
Sent: Thursday, May 09, 2002 1:36 PM
To: sbenson@oem.nyc.gov
Cc: aleidner@doitt.nyc.gov
Subject: Proposal for application and database work to support LMAQTF

Sam - I've attached a proposal for PlanGraphics to grow the current pilot web application into a more robust system.

As you know there are many unknowns (incl. can we host this on OEM's existing GIS infrastructure?), but we've worded the proposal to reflect this situation.

Also, Al Leidner has conferred with DoITT management regarding them potentially funding additional work on this initiative, but they are reluctant to do so at this time. They do offer DoITT's pending contract with PlanGraphics as a vehicle if needed.

Let me know if you have any questions or comments.

Thanks, Jim

Jim Hall

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Proposal for Database and Web Application Development to Support the Needs of the Lower Manhattan Air Quality Task Force

Introduction

The Lower Manhattan Air Quality Task Force (LMAQTF) was created in order to collect air quality data for southern Manhattan and publish it for public access on the internet. The LMAQTF has been tasked with the following:

- Collecting air quality data from several City, state and federal agencies
- Extracting, transforming and loading the data into a central repository
- Publishing select components of the entire database for public access via the internet
- Providing expanded repository access to scientific entities performing research

PlanGraphics Inc. has developed a pilot intranet Asbestos Mapping Application (<http://167.153.41.41/projects/projects/projects.html>) that is available to agencies and individuals who have access to New York City government's intranet (known as "Citynet"). This site is limited in both data and functionality (e.g. it only includes data provided by four agencies) and was developed primarily as a proof of concept. The New York City Department of Information Technology and Telecommunications funded the development of the pilot.

In this document PlanGraphics lays out the scope and budget to complete a broader implementation to support the data gathering and publishing needs of the Lower Manhattan Air Quality Task Force.

Project Scope

Assumptions

The following assumptions have guided the development of this document:

- Two levels of data access should be included:
 - Restricted public access via internet
 - Direct scientific access
- Nine agencies will contribute data to the effort including:
 - Environmental Protection Agency (EPA)
 - New York City Board of Education (NYCBOE)
 - New York City Housing Authority (NYCHA)
 - New York City Department of City Administrative Services (NYCDCAS)
 - New York City Department of Environmental Protection (NYCDEP)
 - New York City Department of Health (NYCDOH)
 - New York State Department of Environmental Conservation (NYSDEC)
 - New York State Public Employee and Health Bureau (PESH)
 - Occupational Safety and Health Administration (OSHA)
- The systems architecture supporting the public access web site must have the following characteristics:
 - N-tier architecture
 - Full systems redundancy for each tier
 - Redundant power supplies for each tier
 - Target system uptime will be 99.5%
 - System will have to be operational for up to one year from the starting date of the project

- This scope of work covers the development of database and web application(s) sufficient to present three different types or groupings of contaminants (asbestos and two others)
- LMAQTF can provide subject matter experts to help define the presentation of the data
- The application development will be done with Java Server Pages – a Java applet in a browser may be used
- The systems architecture solution is not yet defined. Potential options include:
 - Use NYCOEM's EMOLS architecture (ArcIMS w/Oracle)
 - Use an EPA-based/provided solution (unknown)
 - Completely new systems architecture housed at NYC DoITT (Xmarc w/Oracle Spatial or ArcIMS w/Oracle Spatial)

The specifics of the work effort described below will depend upon and vary according to the systems architecture solution chosen.

Task Series 1. Planning and Design

The following activities will occur as part of the project's initial planning and design effort.

- Conduct Requirement and Resource Analysis
- Review Deployment Architecture Options
- Select Deployment Architecture Solution
- Design Overall Internet GIS Application Architecture
- Conduct Application(s) Functional Requirements Workshop(s)
- Develop Application(s) Function Specifications
- Develop Application(s) Design and Prototype
- Develop Acceptance Criteria

Task Series 2. Database Development

The following activities will be needed to ensure the development of the data repository:

- Collect and Analyze Agency Datasets
- Develop Logical Database Design for LMAQTF Application(s)
- Develop Physical Database Implementation for LMAQTF Application(s)
- Extract and Load Existing DoITT GIS Utility Data Sets
- Extract, Transform and Load Agency Datasets into Oracle
- Perform Data Quality Control*
- Perform Database Indexing and Tuning
- Database Movement Between Development and Production Systems
- Design & Implement Database Security and User Security
- Develop Database Management Procedures
- Develop System Administration Procedures
- Additional Data Cleanup (costs presented in this document include the time for two junior staff to work for one week each)

* The project team will make a good faith attempt to resolve data problems, but would have to rely on the maintaining agency to perform major data cleanup or reformatting

Task Series 3. Application Development

The following activities will be required in order to develop and deploy the application interfaces:

- Develop Overall Common Application Functions
- Revise Asbestos Mapping Application
- Develop Each Application Using Interactive Prototyping
- Unit Test Each Application
- Install and Perform Integration Testing for Each Application
- Develop Online Help Manual
- Perform System Testing Against Acceptance Criteria
- Provide One Year Limited Maintenance Support
- Provide User Training
- Provide User Support (9-5, M-F)
- Provide Administration Support (9-5, M-F)

Tasks Series 4. Systems Architecture Development

The following tasks are required to ensure that the software, hardware and networking components of the project are successfully implemented:

- Develop System Configuration Design
- Assist in Hardware and Software Procurements
- Oversee the System Installation and Configuration
- Perform System Acceptance Test
- Configure Servers
- Provide Oracle DBA Services for GIS DB Server
- Provide System Admin Services for GIS System
- Perform Stress Testing on the GIS System
- Provide System Capacity Requirements

Task Series 5. Project Coordination

These tasks are needed to ensure that the project meets scope and budget defined in this document and accurately reflect the needs of the participating agencies and the public.

- Attend Weekly LMAQTF Meetings
- Attend Weekly Buildings-Parks-Data Committee Meetings
- Coordinate with LMAQTF on the Database Issues
- Coordinate with LMAQTF on the Presentation Issues
- Project Management

Project Costs

Costs By Task

The estimated fees for this effort are presented in Table 1 below. Note: The specifics of the work effort described below will vary according to the systems architecture solution chosen.

Table 1. – Costs By Task

Task Series Designation	Task Series Cost
1. Planning and Design	\$24,000
2. Database Development	\$75,000*
3. Application Development	\$40,000
4. Systems Architecture Development	\$22,500
5. Project Coordination	\$27,500
Total Project Cost (Labor and Expenses):	\$189,000
Additional Optional Infrastructure Cost**:	\$160,000

* This assumes that the data received from the nine agencies is of sufficient quality and completeness to enable "quick" loading – if unforeseen data cleanup is required, PlanGraphics will look to the maintaining agency to perform major data cleanup or reformatting or, if this is not possible, perform the actions required and bill for time and materials above and beyond the estimated cost of the project.

** New hardware, software and networking components will be needed only if an alternate hosting option can not be found. The architecture priced is based on a collection of Sun 220R servers.

Contract Terms

The work described in this document will commence upon PlanGraphics' receipt of a purchase order or contract from either FEMA or the City of New York. PlanGraphics has both a GSA Schedule and an existing contract with the New York City Department of Information Technology and Telecommunications; either could potentially be used as a contract vehicle.