

Quad Cities/Bi-State Region Coordinated Aerial Photography Project

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Today I'd like to share information with you about our efforts to coordinate the purchase of region-wide updated aerial photography that local governments will use in their Geographic Information Systems, or GIS.

Background

- Each County/City “go it alone”
- Duplicative effort
- Exploratory group – Spring 2004
- Similar aerial photo needs
- Omaha-Council Bluffs (MAPA)
Example

•The status quo for the acquisition of aerial photography in the Quad City area is to go-it-alone. This means that counties, cities and other agencies plan, fly, and pay for their aerial photo data on their own.

•Bi-State staff coordinates a GIS User group for the purpose of sharing information and holding presentations on new technologies and resources. In the Spring of 2004, a number of GIS coordinators formed an exploratory group to consider the idea of turning their individual county/city aerial photo flights into a region-wide project.

•We discovered that all of the participants have similar needs . . .

- We all require high quality aerial products
- We aspire to the same mapping accuracy standards
- and we seek an affordable product.

•We also discovered that aerial photo products between counties and cities are similar enough from a technical perspective that jointly acquiring such a product is possible.

•In researching the feasibility of a region-wide project, we looked for similar projects done in other areas and found that this is not a new concept and that many multi-jurisdictional projects have been done nation-wide. We looked to a project that began a year ago in the Omaha-Council Bluffs area that was coordinated through their regional planning agency, MAPA (which is a Council of Governments, similar to Bi-State). Their group consisted of 4 counties, 3 cities, the COG, natural resources district, airport authority, Nebraska Dept. of Roads, FEMA, USGS.

Benefits/Challenges

- Cost savings
- Shared administrative preparations
- Shared expertise
- Region-wide geographic information for planning, economic development & transportation development
- Challenge: Funding all jurisdictions simultaneously

As we continued to explore the idea of a region-wide project we identified several benefits of working together.

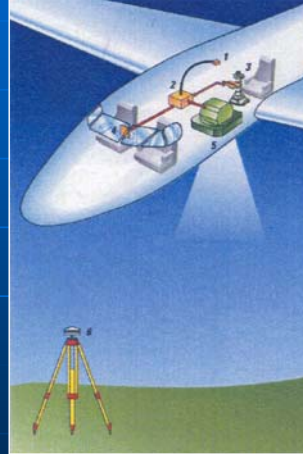
- There is potentially a substantial cost savings over contracting separately for desired work. Some estimate this to be 10 to 25%.
- Administrative efforts to develop the RFQ & RFP, and interviewing processes are shared.
- We are able to capitalize on the shared expertise of the project participants. We have a core of ten GIS professionals working on the project (with up to 25 at times). Those agencies that have done this work before help those that have less experience.
- End product will include the acquisition of quality geographic data that spans our common Metropolitan Statistical Area (MSA) and region. This data will be valuable for many types of planning from economic and development to transportation issues.

Challenges:

- Not all jurisdictions are on the same funding cycle. Currently working on getting this put into budgets. Advantage: For some, work will cycle over two fiscal years.

Aerial Photos & GIS

- Aerial Photos are used for GIS base
- Many features can be built from this base
- Used for mapping utilities, infrastructure
- Used for planning and development
- Optimal aerial flight window is March-April



-Used as an accurate base for Geographic Information Systems. Many features can be built from this base, including street centerlines, parcel lines, building footprints and elevation contour lines.

-Used for mapping our cities' utilities & infrastructure

-Used for planning and development

•In our area, March or April is the optimal time for aerial photography flights. There is little vegetation, no leaf or snow cover and reduced shadows, because of the position of the sun, river levels.

Aerial Photo Accuracy

Scale & resolution affect accuracy (1" = 100')



Talk about the importance of high quality, high resolution photography for identifying features and correct position on the earth's surface.

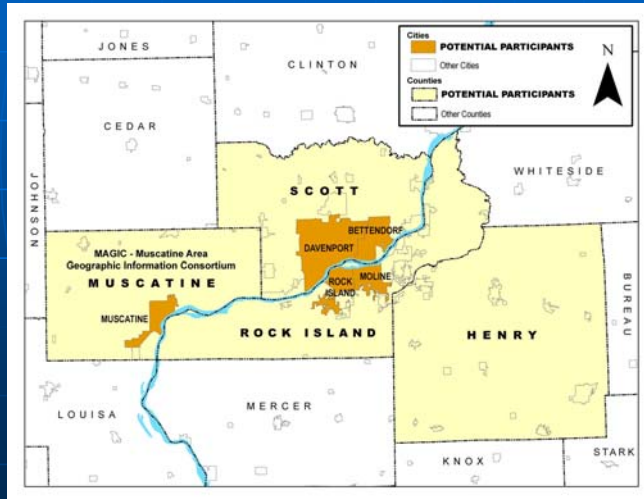
Aerial Photo Accuracy

State of Iowa public domain photo



Aerial Photo Participants

- Counties: Henry, Muscatine, Rock Island, and Scott
- Cities: Bettendorf, Davenport, Moline, Muscatine and Rock Island



- Others . . .

Local governments participating in the project include:

- Henry, Muscatine, Rock Island, and Scott Counties
- Cities of Bettendorf, Davenport, Moline, Muscatine and Rock Island
- Early on in the project we've also explored the possibility of increased participation from agencies such as **Clinton City and County**, Linn, **Cedar, and Washington Counties AND** Agencies such as **Iowa American Water**, Mid-American Energy, Army Corps of Engineers, etc...; and **LeClaire** has recently expressed interest.
- Mention Mercer County**, just flown this past spring.
- We have held monthly coordinating meetings since April with at least one representative from each jurisdiction.
- In addition, staff from the Dubuque area Council of Governments, ECIA has attended several meetings on behalf of Clinton County/City

Aerial Photo Timeline

- Planning: April – July 2004
- Qualification-based process – August – September 2004
- RFP – October 2004
- Vendor selection – December 2004
- Flight - Spring 2005
- Draft photos - Fall 2005
- Final photos - December 2005

We are using a qualification-based process to select a group of vendors. An invitation to submit Statements of Qualifications was mailed directly to 28 vendors, in addition to the publication of a public notice. We are currently reviewing statements of qualifications for twelve companies that would like to bid on our project.

Our schedule calls for an invitation to submit proposals for this project in mid-October, with the selection of a vendor in December. The Winter months will be spent finalizing contracts between the chosen vendor and each participant. The flight will occur when conditions are favorable, March/April, with initial delivery of products by fall of 2005. We are scheduled for final delivery of all products by December 2005.

Conclusion

- Received \$15,000 grant to assist in effort
- Cost Savings
- Shared administrative preparations
- Shared expertise
- Photos w/ same vintage date for most of MSA/Region

•If you recall we asked for your approval in May to apply for \$15,000 from the National Spatial Data Infrastructure Program to assist in the coordinative efforts of this project. I'm happy to report that we have received these funds. We were 1 or 12 recipients in the Coordination category, nation-wide.

In conclusion I'd like to re-emphasize the benefits of this project:

- We hope to realize a potential cost savings (10-25%)
- We are sharing the administrative efforts to plan and prepare for the project
- We have the shared expertise of 10 -25 GIS professional among the group
- We'll have photos that span our Metropolitan Statistical Area (MSA) and region with the same vintage date.

Finally, I'd like to ask that if this project comes before your Boards and Councils that you'll consider funding the acquisition of updated aerial photography for our region.