Imagery Subcommittee Meeting Minutes
September 11, 2006

In Attendance: Sue Carnevale, SANDAG
Paul Hardwick, SANDAG
Lisa Lubeley, City of San Diego
Tom McDowell, City of Chula Vista
David Lindsay, County of San Diego
Barbara Kent, CALTRANS
Clint Garrison, County Water Authority
Wendy Barto, City of Encinitas
Dan Hildebrand, City of Escondido

Results from Recent Partnership Image and Terrain Data Survey

We reviewed the results from the survey that went out to agencies that recently collaborated on an imagery and/or terrain acquisition project in 2004 and 2005. Some general results from the survey are listed below:

- There were 19 of 23 respondents, an 83% response rate
- The City of Chula Vista provided cost information for the entire 2004 South Bay partnership
- It also appeared that agencies did not obtain cost breakdowns for the various products received, only knew total cost of the project
- For some agencies there appeared to be some confusion as to the types of imagery and terrain products received as part of the partnership, follow up may be required
- About 1/3 of agencies resell their imagery or terrain data, although none has made more than $5,000 in resales
- The majority of agencies want imagery updated more often than terrain data
- About 2/3 of the agencies responded QA/QC'd their product deliveries and about _ would be willing to pay a 3rd party consultant to perform QA/QC
- The majority of agencies would like to get updated imagery and terrain data in the 2009/2010 time frame
- Over 90% of respondents are willing to participate in a future imagery and/or terrain data acquisition partnership
- Most agencies support USGS participation in the next partnership and allowing some version of the data to be provided in the public domain; about _ of the agencies still want to retain licenses to the very high resolution data and allow a coarser resampled product to go into the public domain
- The recent 2005 partnership covered over 800 square miles with a combined cost exceeding $1 million

There were discussions on whether future high resolution partnerships for imagery would need to be for 3-inch resolution data. It was thought that many agencies may be willing to move back to 4-inch or 6-inch resolution, depending on feedback from their staff or 'customers'. Once agencies have had more time to work with this data, we will get more and better feedback from them on this issue.

We all still investigating and are led to believe that that partnering with USGS is still an option, even if the Imagery for the Nation program does not come to fruition.

Some questions and concerns were raised on the feasibility of a future multi-resolution partnership such as:

- Can we successfully do a multi-resolution partnership?
- Due to the differing needs of regional and subregional agencies (cities, water districts, etc…) can we successfully do a regional partnership with regional agencies and subregional agencies or should there be 2 efforts
- Based on the rural area cost figures presented at the Southern California Geospatial Modernization workshop at the ESRI User's Conf ($500,000+), would regional agencies have the funds and be

willing to participate – since they can easily get/use 'cheap' commercially available off-the-shelf imagery?
- Who will be the lead agency on a regional partnership effort?
- Is it more cost effective to do spot updates of terrain versus flying entire project area again?
- Can we go forward with an all or nothing approach in that participating agencies opt in for all products, or can we come up with product cost estimates and allow agencies to pick an choose the type of products they need?
- What are the different terrain model options? Are these different for the urban and rural areas? Are these different for regional and subregional agencies?
- Can we get a regional scale county-wide terrain model developed in 2008, then proceed with image acquisition in 2009/2010 time frame?

Dave Lindsay discussed getting an updated terrain model for the entire County using either the 2003 NOAA DEM (3m, 1st return, $250K estimate to get bald earth surface) or the 2005 NextMap IfSAR DEM (5m, $90K for bald earth surface). We need to investigate the quality and resolution of contours that can be generated from these products. Dave volunteered to research these issues and report back to the subcommittee. There should be an outreach effort for regional agencies to cost-share in this acquisition effort as well.

Report from the Terrain Model Subgroup:

The terrain model subgroup is tasked with investigating the feasibility of merging the various subregional very high resolution terrain models into one subregional model. Key discussions from their initial meeting include:
- City of San Diego specs/deliverables from 2005 project – LIDAR with 5ft postings, No contours.
- Dan questioned whether or not agencies with 2 ft contour data were using this data for design engineering work. Wendy said that she would evaluate the use of the contours by her engineering department over the next 6 months and report back to the group.
- Need to verify the types and dates of subregional terrain products that local agencies have.
- Sue and Tom will conference call with Mary Cook of AirphotoUSA on October 12 to discuss assembling existing high-resolution DTMs from urban areas into a seamless, high-res dataset that they could use for rectification to provide better imagery product(s) to the region.

Report from the Cost Subgroup:
- In reviewing cost information from the LARIAC project, Southern CA GMP, and from the recent partnership survey it doesn't appear to be feasible to come up with separate cost estimates for terrain data, contours, and orthorectified imagery. We might just have to outreach with total project cost figures.
- Sue is concerned that the regional component could be the weak link in a county-wide multi-resolution image and terrain data acquisition partnership, but this may not be an issue if the County of San Diego is able to lead and go forward with obtaining a DTM from NOAA or IFSAR data.
- They will meet again on October 23 to try to come up with budgetary cost estimates figure for outreach efforts.
- How do we budget for this in 2009/2010? Do agencies have the capability of rolling over funds from year to year versus having to spend their allocated monies each fiscal year?
- How handle requests for the data after the fact? Sue suggests a model where we can let agencies in if they are willing to pay what comparable partnering agencies contributed.

ACTION ITEMS (compiled by Sue):

1. Prepare meeting minutes to be posted to SDRGC web site (**Wendy**)
2. Check into the availability of the raw IfSAR data for the 2003 NOAA DEM for determining post processing options and costs to prepare a bald earth surface (**David**)
3. Determine product specs, cost, licensing options, and contour generation options for the 2005 Internap NextMap IfSAR DEM product (**David**)
4. Compare/Contrast the NOAA vs. NextMap DEM products, determine best product for the region to pursue (**David**)
5. Discuss feasibility of merging existing subregional terrain models with AirPhotoUSA (**Tom, Sue** - conf call set for 10/12 at SANDAG at 10am)
6. Due to low response rate, send out another reminder about the image and terrain data survey (**Sue**)
7. Send out email to CDF contact to participate in the general image and terrain data survey (**Dan**)
8. Cost group to meet again to determine budgetary cost estimates for outreach efforts (meeting set for Monday, October 23rd at SANDAG from 2-4pm, Conf 8A)
9. Terrain subgroup to meet again (possibly) after above research is done
10. Follow up phone calls to agencies that participated in the recent partnerships to verify products received, cost breakdowns, and uses of data products (**Dan)**
11. Wendy said that she would evaluate the use of the contours by her engineering department over the next 6 months and report back to the group (**Wendy**).

Follow up Meetings:
Cost Subgroup – Monday, October 23rd at SANDAG from 2-4pm, Conf 8A
Next Imagery Subcommittee Meeting - Thursday, November 16th at SANDAG from 2-4pm, Conf 8B