**Los Angeles Region –
Imagery Acquisition Consortium
(LAR-IAC2)**

Welcome!
LAR-IAC2 Kickoff Meeting

January 17, 2008

**Prepared by:
Los Angeles County**

Agenda

- **Welcome & Introduction – LA County**

- **LAR-IAC – Some Final Words – LA County**

- **LAR-IAC2 – Brief Overview – LA County**

- **LAR-IAC2 – Vendor Presentations**
  - Presentation – **Pictometry** (Oblique imagery)
  - Presentation – **Sanborn** (Ortho imagery)
  - Presentation – **Dewberry/Pinnacle Mapping** (Independent QA/QC)
  - Presentations - Derivative data
    - Building Footprints - **Sanborn**
    - Solar Mapping - **CH2MHill**

- **Discussion / Other Items / Closing – LA County**

LAR-IAC Benefits

- Highly successful project
- Reduced costs (over $6 million)
- High quality data
- Seamless countywide data provides a common picture for all jurisdictions
- Nationwide model

LAR-IAC Final Costs

- Total Project Costs = $5,726,305
- Total Collected from all Participants $6,312,097
- Total to be refunded to participants (as refund or credit for LAR-IAC2; the latter is preferred) $585,792.
- Your department/city/agency should have received a letter from the CIO

LAR-IAC Sublicensing and Internet Distribution

- Please follow MOU and sublicense agreements

- Sublicense agreements and FAQs on LAR-IAC Project web site:
  http://planning.lacounty.gov/lariac/license.htm

- We will probably create a subcommittee of LAR-IAC to meet regularly to discuss licensing issues as they arise

LAR-IAC Questions

- Questions were to go here...but in the interest of time, we can answer specific questions after the meeting

- There is a lot to discuss for LAR-IAC2

LAR-IAC2 Overview

Purpose and Objectives

Purpose: Update natural color ortho and color oblique imagery

- **Objective 1:** Obtain updated highly accurate digital aerial imagery

- **Objective 2:** Continue collaboration efforts from previous LAR-IAC effort

Purpose and Objectives

- **Objective 3:** Use lessons learned to improve project
  - Improve coloration (radiometry)
  - Improve project status updates
  - Wider range of delivery formats
  - More Internet distribution
  - Simplified sub-licensing

Coloration

- More emphasis on coloration
  - Flying North to South
  - Lower camera heights during flight
  - Access to data before delivery for comment
  - MrSID compression may be a point for color enhancements
- Note: There is a trade-off between feature visibility and color balance

Coloration (cont)

- Two pilots done (11 mp and 16 mp sensors)

LAR-IAC   LAR-IAC2 Pilot

Project Updates

- Access to some data from Sanborn (their web based "Sanborn QC" tool)
- LAR-IAC2 status spreadsheet in place
- Monthly status update via web and email
- Bi-monthly briefing meetings

Delivery Formats

- LAR-IAC will include portable hard disks
- Wide range of ortho imagery formats
  - GeoTIFF (raw)
  - JPEG2000
  - MrSID compressed (mosaics)
  - ECW compressed (mosaics)
  - ArcSDE seamless
- Should reduce internal distribution time

Current Setup of Contracts

- **Vendor 1 – Pictometry**
  Extend Contract, With Modifications
  - Add ortho imagery component (Sanborn as primary subcontractor)
  - Infotech contract not renewed

- **Vendor 2 – Dewberry & Davis**
  Extend Contract

Distribution and Sub-licensing

- Distribution
  - 4-inch orthos can be displayed on the Internet
  - Oblique imagery can be shown on the Internet
    - Note: measurement tools for internal use only
  - 1 foot orthos can be distributed to the Public
- Licensing
  - Participant Agreement, not MOU
  - Sub-licensing
    - One simplified form to cover all data products for sub-contractors

Digital Aerial Imagery Products

- Color Orthogonal Imagery (RGB), 4″ resolution (urban areas) and 1′ resolution (national forests)

- Color Oblique Aerial Digital Imagery (with viewer applications)

- Accurate Quality Control Report for all data products (independent QA/QC vendor)

- No Digital Terrain Datasets, no Elevation Contours and no Near Infrared Imagery

Geographic Scope (LAR-IAC2)

- Los Angeles County
  - 4,083 sq. miles plus small buffer area
- Split into regions (similar to LAR-IAC)
  - Area #1 (Urban)
    - Project area covers approx 2,900 sq. miles
  - Area #2 (National Forest)
    - Project area covers approx 1,050 sq. miles
  - Area #3 (Santa Catalina Island)
    - Project area covers approx 75 sq. miles

- No overlap, no seams, no gaps – full, complete tiles only!

Project Areas - Ortho Imagery (LAR-IAC2)

Project Areas – Oblique Imagery (LAR-IAC2)

4276	Community 2-Way Oblique (12")
139	Community 4-Way Oblique (12")
3309	Neighborhood 4-Way Oblique (4")
16	Neighborhood 8-Way Oblique (4")

Data Delivery Formats (LAR-IAC2)

Participants will get all deliverables and all formats

Delivery Product	Format 1	Format 2	Format 3
Digital Terrain Model (Spot Updates)	ArcGIS shapefile - points, 3D lines	AutoCAD (dwg) – points , lines	Microstation (dgn) – points , lines
Orthophoto (color) (4" and 1')	GeoTIFF & JPG2000	Mr. Sid & ECW (mosaics)	SDE Export
Pictometry oblique imagery (4" and 1')	Proprietary JPG format	Compressed JPG format	

Note: Digital Terrain Datasets, elevation contours and infrared imagery to be done "every other" LAR-IAC acquisition (participation and funding permitting).

Slide 1: Data Delivery Formats

Data Delivery Formats

Participants will get all deliverables and all formats

LAR-IAC

Delivery Product	Format 1	Format 2	Format 3
Orthophoto (color and CIR) (4" and 1')	GeoTIFF	JPEG2000	
Digital Surface Model	ASCII - points	ArcGIS shapefile -points	Microstation (dgn) - points , lines
Digital Terrain Model	ArcGIS shapefile - points, 3D lines	AutoCAD (dwg) – points , lines	Microstation (dgn) – points , lines
Digital Elevation Model	ArcGIS raster	AutoCAD (dwg)	
Contours (2' interval)	ArcGIS shapefile	AutoCAD (dwg)	
Pictometry oblique imagery (6")	Proprietary JPG format		

LAR-IAC2

Orthophoto (color) (4" and 1')	GeoTIFF & JPEG2000	Mr. Sid & ECW (mosaics)	SDE Export
Pictometry oblique imagery (4")	Proprietary JPG format	Compressed JPG format	

Note: Digital Terrain Datasets, elevation contours and infrared imagery to be done "every other" LAR-IAC acquisition (participation and funding permitting).

Slide 2: Participants List

Participants List

City Participants
- Burbank
- Carson
- Cerritos
- City of Industry
- Claremont
- Covina
- Culver City
- Diamond Bar
- Glendale
- La Cañada Flintridge
- La Habra Heights

- Lakewood
- Los Angeles (including Port of LA)
- Manhattan Beach
- Monterey Park
- Palmdale
- Pasadena
- Pomona
- Santa Clarita
- Santa Monica
- Torrance
- Whittier

County Participants
- Agricultural Commission/Weights and Measures
- Assessor
- Beaches & Harbors
- CIO
- Health Services
- Internal Services Department (IT Services only)

- Parks and Recreation
- Public Health
- Public Works (DPW)
- Regional Planning (DRP)
- Registrar-Recorder/County Clerk

Other Agencies
- Los Angeles Unified School District
- Santa Catalina Island Conservancy

- US Geological Survey

Slide 3: Simplified Schedule

Simplified Schedule

- May-Oct 2007 scope out LAR-IAC2 needs and get support from participants (ongoing after that)
- Sep-Dec 2007 setup contracts (all firms)
- Oct-Nov 2007 setup bridge funding (CIO and CEO)
- Jan-Feb 2008 finalize contracts
- Jan 2008 start flying
- Mar-Apr 2008 flying completed...start processing
- Apr-Aug 2008 QC underway
- Oct-Dec 2008 delivery underway

Slide 4: Staying Up-To-Date With Project Information

Staying Up-To-Date With Project Information

- Meetings
  - Briefing Meetings (every other month)
  - Technical Advisory Group (as necessary)
  - Licensing Subcommitee (as necessary)
  - User Group Meetings (quarterly)

- Documents
  - Participant Agreement
  - Status Reports

Slide 1: LAR-IAC2 Costs

LAR-IAC2

Vendor	Product	Costs
Pictometry	Color Oblique Imagery (4" neighborhoods, 12" community shots) EFS, ActiveX, ArGIS Extension and Change Analysis	$1,075,000
Sanborn (subcontractor)	Color Orthogonal Imagery (4" and 1' resolutions, certified product from Pictometry imagery capture)	$986,000
Dewberry	Independent QA/QC and Distribution (including data format preparation)	$645,000
Infotech	License change for Digital Terrain Model (DEM) (for 3m posting version for public realm)	$87,000
	Total Estimated Vendor Costs	$2,793,000
	Total Committed-To-Date	$3,087,000

Slide 2: Accuracy Standards for Digital Imagery

LAR-IAC2

- Same standards as LAR-IAC
  - American Society for Photogrammetry and Remote Sensing (ASPRS)
    - Class 1 for Areas 1 and 3 = 1 foot accuracy
    - Class 2 for Area 2 = 2 foot accuracy

- Product Accuracy Reports
  - Provided by QA/QC Vendor (Dewberry)

Slide 3: Contact Information

LAR-IAC2

- **Project Director**
  Mark Greninger, Associate CIO (County GIO)
  mgreninger@cio.lacounty.gov (213) 974-2154

- **Project Manager**
  Nick Franchino, GIS Manager, Regional Planning Dept.
  nfranchino@planning.lacounty.gov (213) 893-0881

- **Project Web Site**
  http://planning.lacounty.gov/lariac

Slide 4: LAR-IAC Project Web Site

LAR-IAC2

http://planning.lacounty.gov/lariac

Vendor Presentations

- Presentation – **Pictometry** (Oblique imagery)
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Participants Follow-Up

- Get us information for large grading projects since March 2006 – notice will be sent out
- External hard drives will be provided
- Provide us updated contact information
- Follow (adhere to) participant and licensing agreements
- Attend ongoing LAR-IAC2 Briefing Meetings, LAR-IAC User Group and Pictometry training sessions
- Continue to spread the word (more participants equals less costs for all involved)

Other Items / Closing

- Lessons Learned
  - Winter flying, color and radiometry
  - Distribution dates
  - Uses of the imagery/expectations
- Thanks to Project Team!
  - CIO
  - County Counsel
  - Technical Advisory Group (TAG)
  - My staff

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Questions/Comments?
(time permitting)

January 17, 2008

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Los Angeles County**