

TOOLS · LOGS · REMOTE SENSING · ELEVATION MODELS · CONTIGUOUS · NETWORKED · DATA PUBLISHING · ANALYSIS & DIGITAL MAPPING · 3D VISUALITY · GROUND · AIRBORNE MAPPING · TRAINING

 Total Geospatial Solutions

LAR-IAC2 Status Update

January 22, 2008
Los Angeles, CA
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Agenda

- Discussion of Orthophoto Production
 - Locate
 - Adjust
 - Mosaic
 - Picture Perfect

- Specific LA County Issues

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LOCATE – Aerial Triangulation

- Purpose is to pinpoint image location as best as possible
- Measured by spatial accuracy
 - Relative to neighboring photos/blocks
 - Absolute to known ground positions – targets
- Images and blocks build upon each other
 - One final, cohesive solution for all 280,000 photos

- Fundamental building block for rest of process
 - Cannot proceed without sufficient AT Solution
 - Sanborn is just starting majority of ortho production

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AT Superblocks Layout

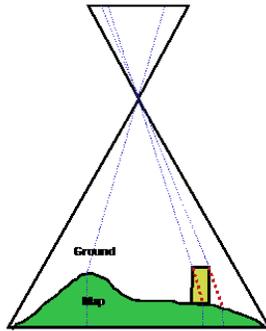


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ADJUST – Ortho Rectification

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- Flatten photo of 3D ground to a 2D “map”



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Terrain Creation

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- Ortho-rectification requires a model of the earth
- Produced multiple ways – LiDAR, AC, Compilation
- Sanborn is updating existing surface where changes are noted through compilation
- Above ground features still exhibit “lean” unless part of the model

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Compilation

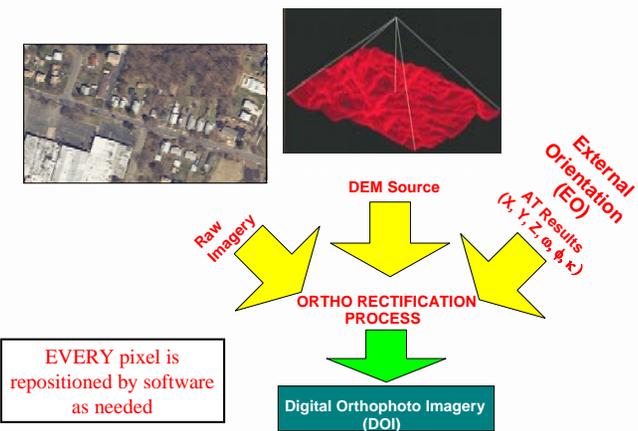
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Orthophoto Production

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Orthophoto Production

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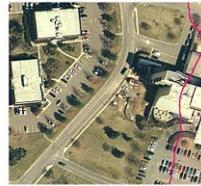
- ✓ Locate
- ✓ Adjust
- Mosaic
- Picture Perfect

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MOSAIC – Seamline Generation

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- Combine 280,000 photos into one image
- Creates over half million “seamlines”
- Proper placement hides transitions



Orthophoto without intelligent seams.



Orthophoto mosaic with intelligent seams.



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Picture Perfect – Color Balancing

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- Process of blending radiometry (color) of all images
- Images taken over 5 months by 10+ cameras
- Final image will be lower radiometric quality than any single image



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Orthophoto Production

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- Locate – Aerial Triangulation
- Adjust – Orthorectification
 - Include terrain model
- Mosaic – Seamline Generation
- Picture Perfect – Color Balancing

Questions?

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Specific LA County Issues

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- Unable to find AT issues until orthorectification



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Overall Mosaic

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- Color looks great at 1:1
- Zoomed out appearance improved from LARIAC 1



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Image Artifacts in Some Areas

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- Majority of QC calls are artifacts in original imagery
- Dewberry will provide shapefile of issues at final delivery
- Sanborn is reducing delivery times 33 – 66% from original schedule and compressing more blocks through system at one time

Questions?

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POC

SANBORN

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