Georectification of Historic Aerial Photographs for Douglas County, Kansas

ESRI Education Users Conference 2004
Rhonda Houser, University of Kansas
Introduction

- **enhance** existing image archive
- **contribute** to technical methodology
- **add** to supply of historical spatial data
- **create** data that can be used with other spatial data

Air Photo Project, ESRI Education Users Conference 2004
Background

Scan

• Use air photos from 1930s to 1980s
• Convert print photo to image by scanning
• Determine township, range and section
Target image- unknown geographic coordinates

Reference image- known geographic coordinates

Georeference
Coarse adjustment... shift, rotate, etc.
Identify potential links between target…
... and reference image.
Create a link on target image

Georeference
Create a matching link on reference image

Georeference
Repeat process to identify matched points
# Douglas County, KS Aerial Photography Set (1937)

**Raster Image (TIFF)**

<table>
<thead>
<tr>
<th>Description</th>
<th>Spatial</th>
<th>Attributes</th>
</tr>
</thead>
</table>

**Keywords**

**Theme:** Aerial, Air, Photograph, Photo, Image, Raster  
**Place:** Eudora, Lawrence, Douglas County, Kansas, Baldwin, Clinton Lake, Lecompton

**Description**

**Abstract**

This raster dataset consists of approximately 200 aerial photographs taken in 1937 in Douglas county, Kansas, United States. The Douglas County Public Works Department provided the original print photographs to the University of Kansas Libraries. The photographs were converted to images via a large-format scanner.

**Purpose**

Image files for use in teaching, research, reference, and for other purposes.

**Status of the data**

Complete  
*Data update frequency:* As needed  
*Time period for which the data is relevant:*
Online Image Archive

Air photos are available online:

www2.lib.ku.edu/mapscoll/web/airindex.htm
Choose quadrant

Click on map to zoom into a quadrant.
Click on the area for which you want a photo.

Choose area
Choose year

Douglas County Aerial Photography

You clicked on: Township 13 S, Range 20 E, Section 07

Select a year from the sets (below) to view an individual air photo in a new window. Metadata files contain background and source information about the air photo sets.

1937 (metadata) 1966 (metadata)
1941 (metadata) 1976 (metadata)
1954 (metadata) 1986 (metadata)
1995* (metadata)

*These images are georeferenced and span Lawrence city limits.

Click for information on photo viewing and download or close window.
View or download image

If you don't see an image and haven't downloaded LizardTech's ExpressViewer Plug-in, click here.
Applications

- land surveying and property valuation
- geography and remote sensing classes
- ecological classification
- wildlife habitat mapping
- drought detection
- geology and soil classification
- transportation studies
- archaeological/anthropological sites
- historic trails
KU Memorial Stadium 1937
KU Memorial Stadium 1954
KU Memorial Stadium 1966
KU Memorial Stadium 1976
Acknowledgements

Sources of data:

• Street data

• Digital orthophoto, county boundary and road data, public land survey system data

• Digital air photo files
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