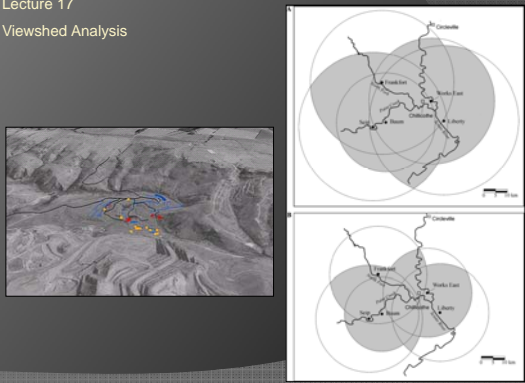


Interpreting Space and Place: An Introduction to Archaeological GIS

Lecture 17  
Viewshed Analysis



The slide features an aerial photograph of an archaeological site with several colored markers (red, yellow, blue) indicating specific locations. To the right of the photo are two diagrams illustrating viewshed analysis. Each diagram shows a central point with a circular area of visibility extending outwards, overlapping with other similar areas to show how different points of view intersect.

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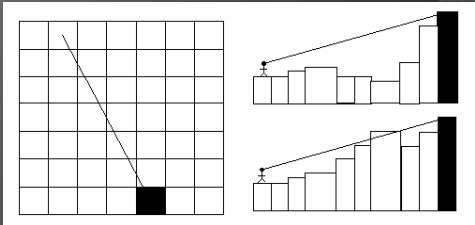
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Interpreting Space and Place: An Introduction to Archaeological GIS

Modeling terrain to answer questions - viewshed analysis



The diagram shows a 10x10 grid with a line of sight starting from the top-left and moving towards the bottom-right. A bar chart to the right of the grid shows the elevation profile along this path, with bars of varying heights representing the terrain's slope. A source credit is provided at the bottom right.

(Source: David Wheatley)

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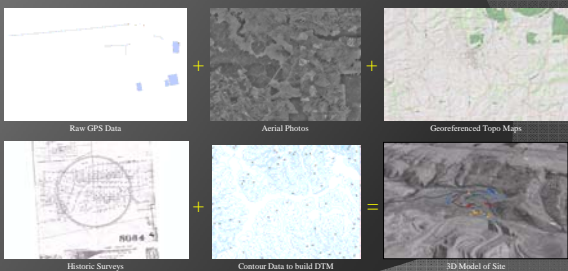
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Interpreting Space and Place: An Introduction to Archaeological GIS

Modeling (landscape or predictive)

Steps include:



The flowchart illustrates the process of creating a 3D model of a site. It starts with 'Raw GPS Data', 'Aerial Photos', and 'Georeferenced Topo Maps' being combined. These are then combined with 'Historic Surveys' and 'Contour Data to build DTM' to produce a final '3D Model of Site'.

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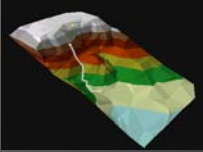
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Anthropological GIS (ANT 4930)

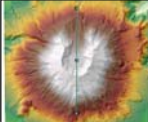
Using this knowledge to answer Anthropological Concerns  
Terrain Analysis (in addition to Viewsheds)




Steepest Path



Calculate Area and Volume



Profile Line Steepness



Mount St. Helens  
South to North Profile

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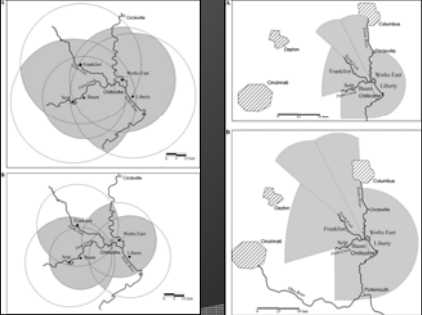
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Interpreting Space and Place: An Introduction to Archaeological GIS

Lecture 17  
Bernardini – is the Earth's surface equal to Euclidian space?



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Interpreting Space and Place: An Introduction to Archaeological GIS

Examples of Use

Modeling terrain to answer questions - viewshed analysis

Long Mounds of Salisbury plains in England

Background

- Among the earliest earthworks in Britain
- Individual viewshed maps for each mound created
- Used to determine if locations were random
- Prove or refute unsubstantiated observations?

(Source: David Wheatley)

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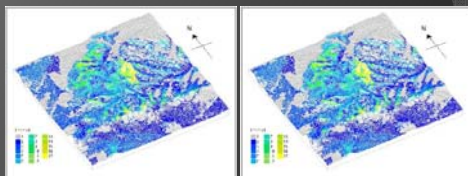
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Interpreting Space and Place: An Introduction to Archaeological GIS

Examples of Use

Modeling terrain to answer questions - viewshed analysis

Long Mounds of Salisbury plains in England



(Source: David Wheatley)

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