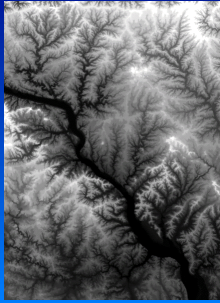


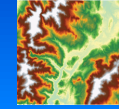
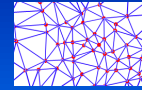
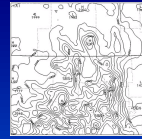
## Using DEM data



## Elevation Data

Three main methods

- Contours
- TINs: Triangulated irregular networks
- Raster (grid)



## DEM explained

- Produced by USGS
- Digital Elevation Model
  - Grid based
  - Commonly correspond to 1:24,000 topo maps or 1 degree quads
  - Stored online in STDS format
  - Converted in ArcCatalog using ArcView 8x Tools toolbar -> STDS Raster to Grid

## Example DEM

- Open a Dubuque County map with the USGS topo map showing
- Click on Add Data
  - In the class directory, add G:\EVS333 Class\DataSets\DubuqueSouth\dubuquesouth
  - In the class directory, also add G:\EVS333 Class\DataSets\DubuqueNorth\dubuquenorth
- Experiment with difference representations.

## Creating Mosaics

- Open the ArcToolbox
  - Choose Data Management Tools -> Raster -> Mosaic to New Raster
  - Pick two adjacent raster images (Dubuque North and Dubuque South -> DubuqueNS)
  - Unfortunately, for many of the ArcToolbox tools, the path can contain no spaces for the tool to work.



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## In ArcScene

Dubuque Example

- Add the DubuqueNS mosaic to ArcScene
- Add the 2004 aerial photo
  - Open the properties
  - Click on the Base Heights tab
  - Choose Obtain heights for layer from surface, and specify Dubuque North
  - Choose Raster Resolution and set to same as original surface
- Right-click on Scene Layers
  - Choose Scene Properties
  - On the General tab, set the vertical exaggeration to 2

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## In Class

- Continue working on your project.

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