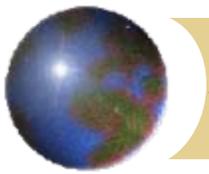


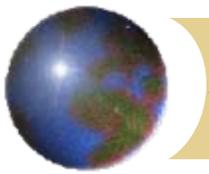
# *Coal Mining Data Standards Workshop*

Sponsored by:  
the National Coal Mine Geospatial  
Committee  
&  
the National Coal Mining Geospatial Data  
Stewards



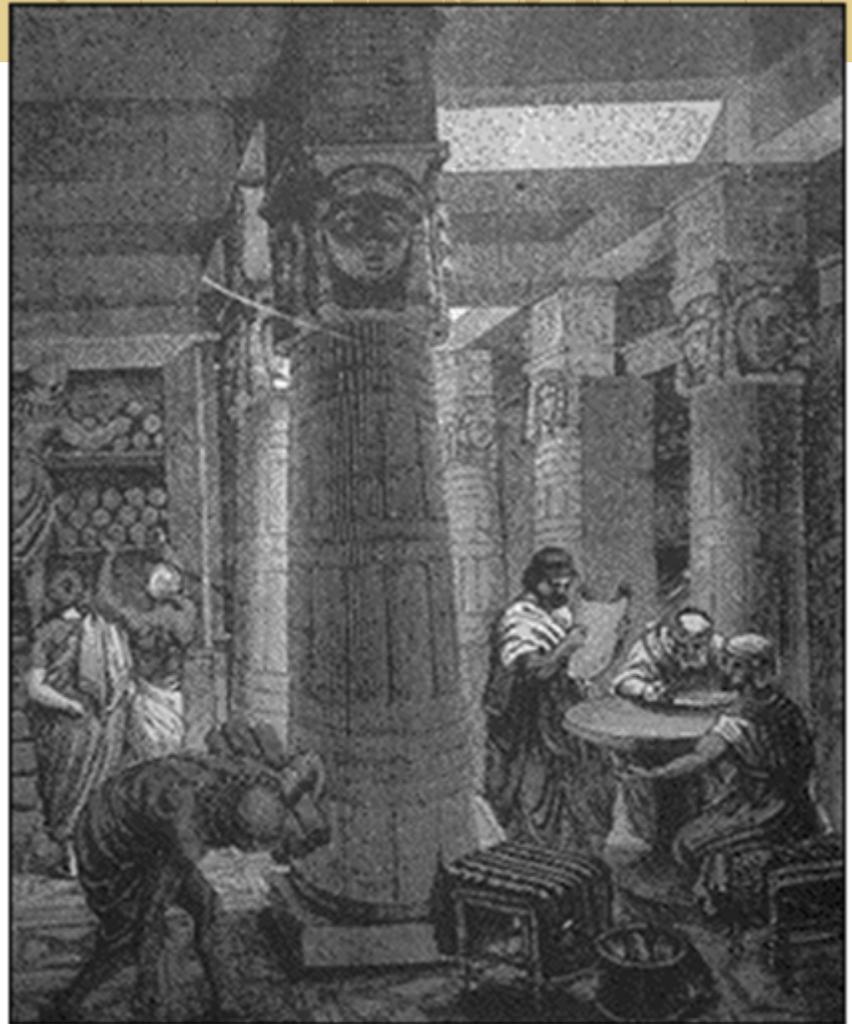
## *Topics*

- Why have a Coal Mining Data Standards workshop?
- What do we want to accomplish?
- Who should attend?
- How will participants collaborate together?
- The datasets for the initial standards creation effort.
- Workshop ... when and where?

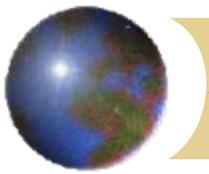


## *Why have a CMDS Workshop (1)?*

- The CDMS workshop kicks off our initiative to create voluntary national coal mining data standards
- Voluntary standards support
  - Emergency response
  - ePermitting
  - Etc.



Times have changed but how we receive coal mining geospatial data



## *Why have a CMDS Workshop (2)? → SMCRA word counts*

### ● General spatially related terms

- ▣ Plans → 35
- ▣ Survey → 8
- ▣ Maps → 13
- ▣ Map → 3
- ▣ Map or plan → 1

### ● Spatial extent terms

- ▣ Location → 59
- ▣ Area → 197
- ▣ Acreage → 3
- ▣ Volume → 4
- ▣ Coordinates → 0
- ▣ Latitude → 0



## *Why have a CMDS Workshop (3)? →*

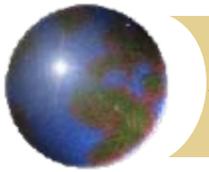
### *SMCRA word counts*

#### ● Geospatial data quality terms

- Accuracy → 1
- Precision → 0
- Scale → 4
- Datum → 0

#### ● Occupational terms

- Engineer → 56
- Surveyor → 10

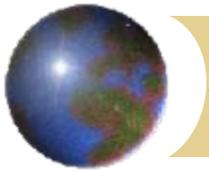


# *Why have a CMDS Workshop (3)? →*

## *SMCRA word counts*

### ✚ Conclusions

- ✚ Area (197) and location (59) were highly important concepts to the creators of SMCRA.
- ✚ Plans (35), survey (8), maps (13), and map (3) were terms used to define how area and location information would be provided
- ✚ Zero to very little use of coordinates (0), latitude (0), datum (0), accuracy (1), precision (0), and scale (4) demonstrate that the creators of SMCRA were certainly not mapping professionals.

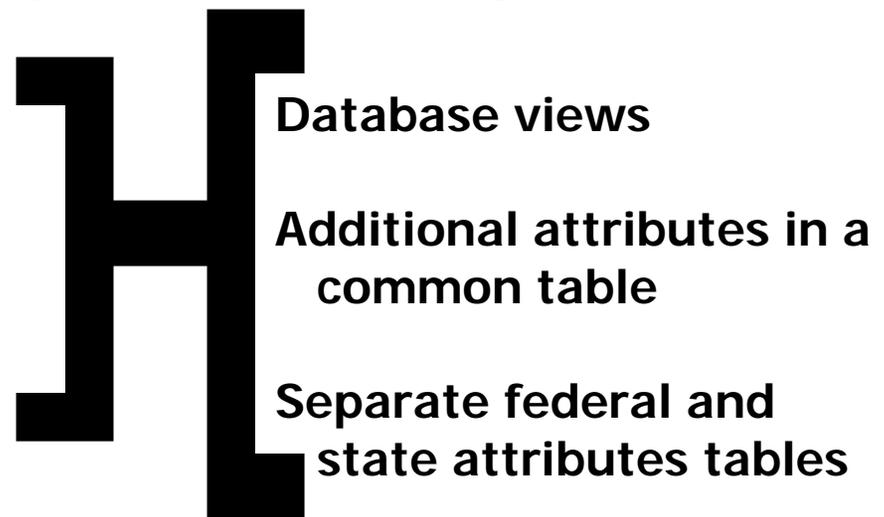


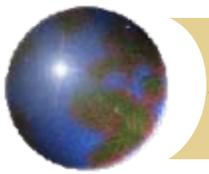
## *What do we want to accomplish (1)?*

- Define structure of graphics and attributes of initially selected national coal mining geospatial data layers

- Minimize impacts on state programs → ArcGIS can now reproject and change datums on the fly

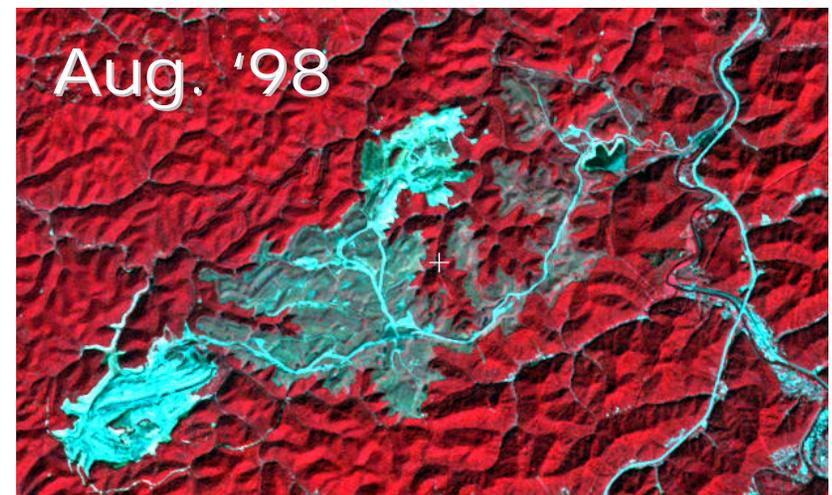
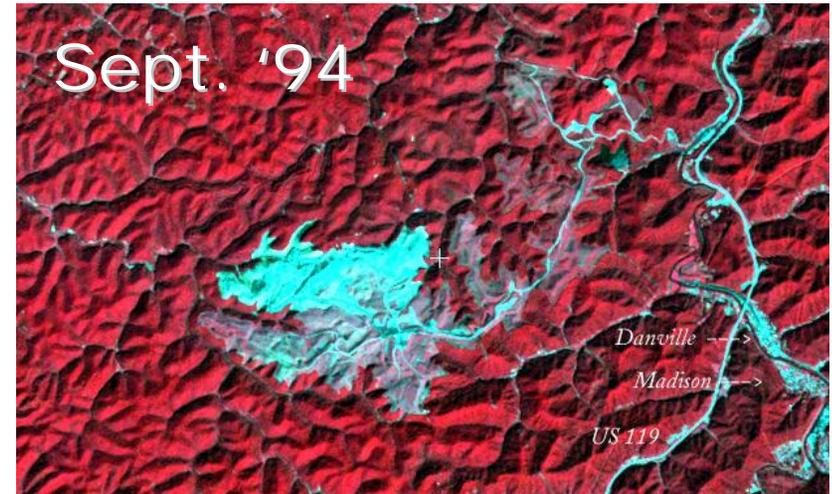
- Two sets of attribute
  - National interest set
  - Unique data set for each state



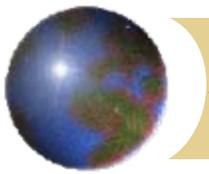


## *What do we want to accomplish (2a)?*

- Capture onsite change over time into a national coal mining database

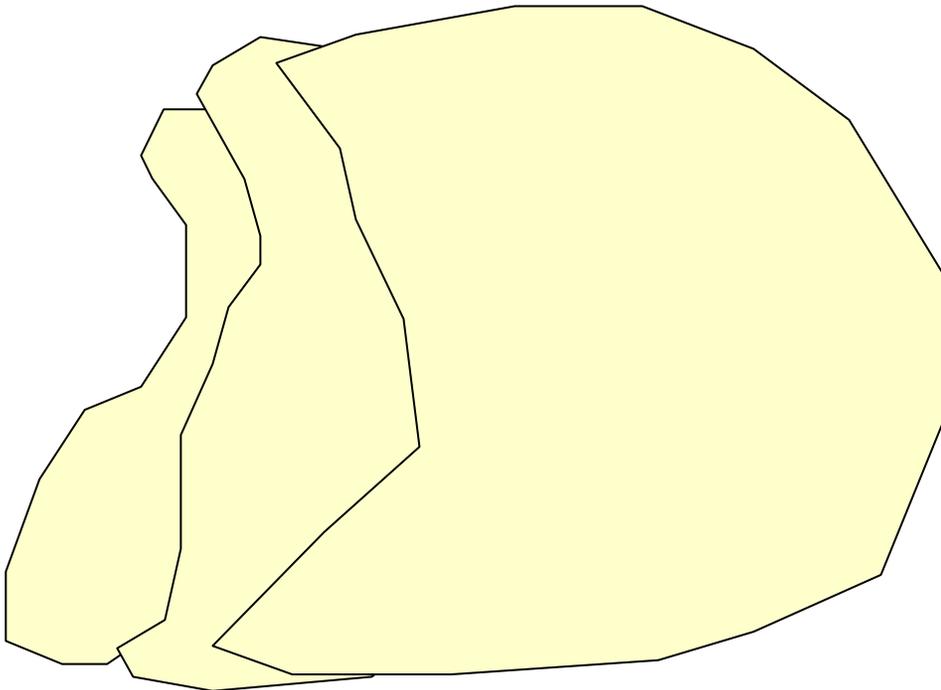


**Hobet 21 Complex west of  
Madison, WV - Landsat TM bands  
4,3,2**

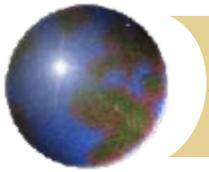


## *What do we want to accomplish (2b)?*

- Capture onsite change over time into a national coal mining database

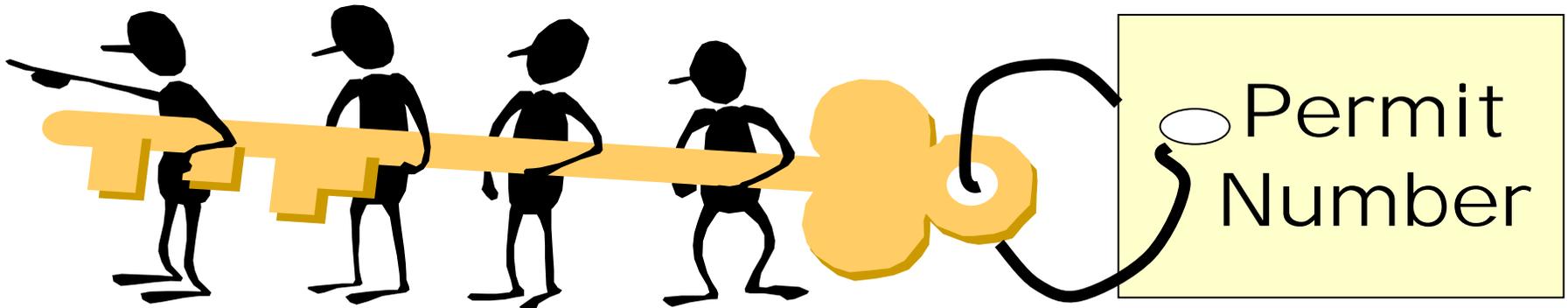


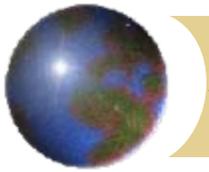
~~2005~~



## *What do we want to accomplish (3)?*

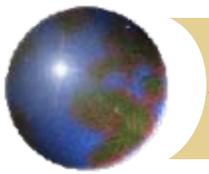
- Insure layers being developed can be deployed using existing and planned infrastructure.
- Share data with mining industry, other government agencies (NMHS, etc.) and the public using a common key ...





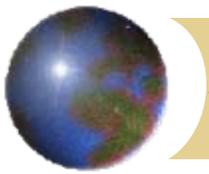
## *What do we want to accomplish (4)?*

- Select a working group to create the National Coal Mining Geospatial Data standards



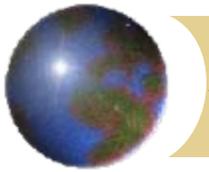
# *Who should attend the workshop? → makeup of the subcommittee (1)*

- Subject matter experts
  - Spatial database design people
  - Spatial infrastructure knowledgeable staff
  - Title IV and V program policy people
- Representative from Standards Groups
  - American Society of Testing and Materials (ASTM)?
  - Federal Geographic Data Committee (FGDC)?
- An ESRI consultant?



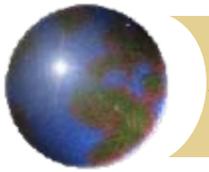
## *Who should attend the workshop? (2)*

- Selecting the subcommittee
  - NCMGC must weight credentials against subject matter list above.
  - Volunteering doesn't insure participation at the workshop
- Solicitation of volunteers at the end of this presentation



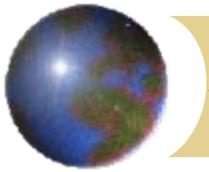
## *How will subcommittee members collaborate together?*

- Workshop → one or two per year depending on funding
- Internet access
  - SharePoint site
  - Public WWW site
- Conference calls
- eMail
- Video conferencing??



## *Datasets selected to begin the process.*

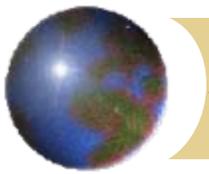
- How the winners were selected
  - Importance to Title IV and V programs
  - Health and Safety considerations → bore holes compared to valley fills
  - Potential interaction of any given permit with other onsite activities → oil and gas well drilling
  - Public's need to know → real estate buys
- And the winners for this year are ...
  - Permit boundary
  - Underground mining extent



# *Surface Mining Boundaries*

Surface mining boundaries are polygons representing the boundary of the **permitted area** of a surface coal mining operation as described on the **most recent mining operations map** contained in a coal mining permit **approved by the regulatory authority**.

Each **approved permit** has a single record in a spatial database of surface mining boundaries. Each record in the spatial database identifies the **permit number** of the surface coal mining operation and contains one or more polygons identifying the areas for conducting surface coal mining operations **approved by the regulatory authority**.



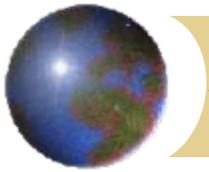
# Surface Mining Boundary



Attributes of kfogis.SDE.permits

OBJECTID*	FEATURE	PERMIT	ACRES	Shape*	SHAPE.area	SHAPE.len
192	permitbnd	2718	11.332179	Polygon	493629.718357	25699.209897
193	permitbnd	2721	355.434672	Polygon	15482734.300601	228991.593289
194	permitbnd	2722	36.652068	Polygon	1596564.099421	17935.032681

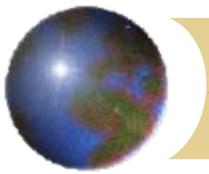
Record: 0 Show: All Selected Records (1 out of 875 Selected.) Options



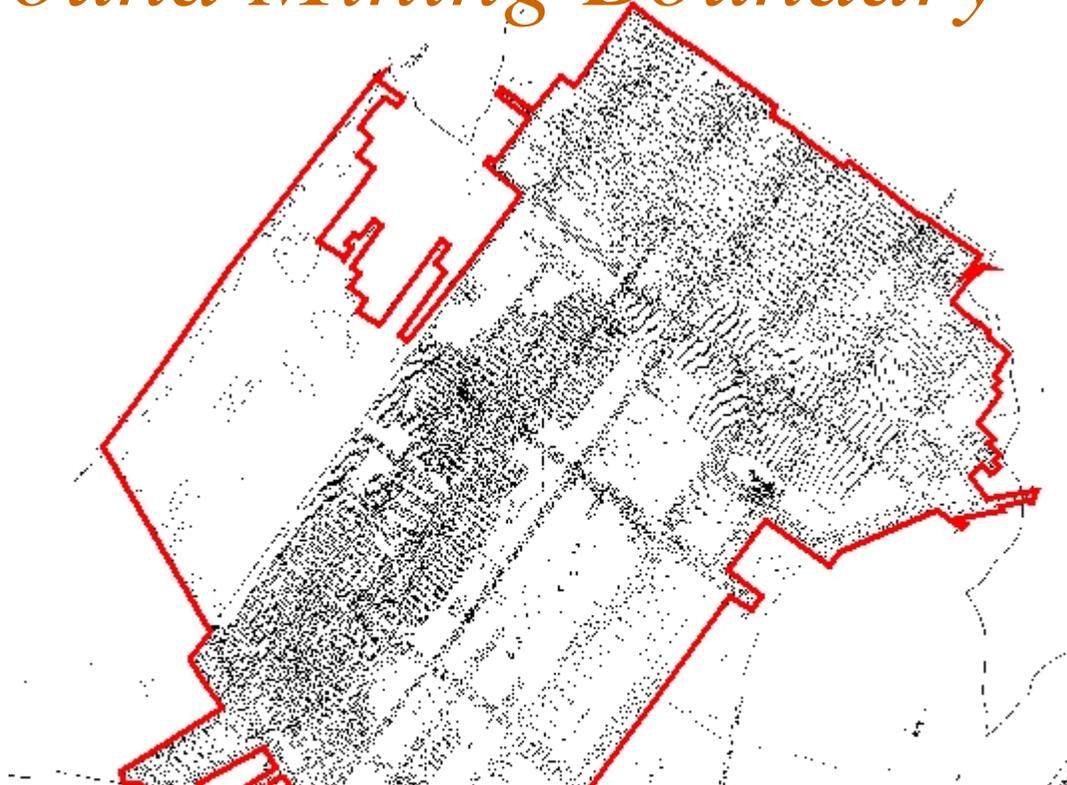
# *Underground Mining Boundary*

Underground mining boundaries are polygons representing the boundary of the underground mine workings of an underground coal mining operation as described on the best available **mine workings maps**.

Each **mine** has a single record in a spatial database of underground mining extents. Each record in the spatial database identifies the underground coal mining operation and contains one or more polygons identifying the areas of underground mine workings.



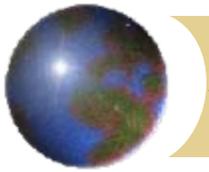
# *Underground Mining Boundary*



Attributes of Extents

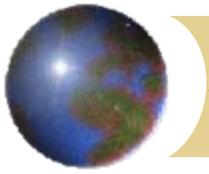
FEATURE	PERMIT	NAME	COALSEAM	MAPTITLE	SOURCE
mined out underground works	prelaw	Unknown		None. Obtained in vector format	mining consultant
mined out underground works	prelaw	Wind Rock Coal and Coke Co.	Dean	Wind Rock Coal and Coke Co., Dean Mine	TDEC Division of Geology
mined out underground works	prelaw	Unknown		None. Obtained in vector format.	mining consultant

Record: 1 Show: All Selected Records (1 out of 29 Selected.) Options



## *First Workshop ... when and where?*

- Details to be determined after selection of the subcommittee members
  - Proposed date → August 15<sup>th</sup>. – September 15<sup>th</sup>.
  - Date to be coordinated with ASTM(?), FGDC(?), and ESRI(?)



# *Volunteers???*

- We need 12 good stewards

