

Graphical Data Exchange Formats for Underground Mine Maps

Manucherh Bako-Zade
and John Craynon
Office of Surface Mining
Washington, DC

Project

- Review of existing graphical data file exchange formats
- Identification of separate needs of technical users and homeowners

Parameters for Review

- File size and compression
- Image resolution
- Color depth
- Ease of use
- Support in common software

Web Based Image Sharing

- Common formats
 - TIFF
 - JPG
 - GIF
 - PNG
 - BMP
 - PDF

Recommendation – Portable Network Graphics (PNG)

- Supports color depth
- Supports transparency
- Supports interlacing
- No loss of resolution in compression
- Supported by image software
- Supported by web browsers
- Utilities can allow annotation
- No licensing issues

Disadvantages of PNG

- Not as well known as JPG
- Larger files than JPG
- Does not support multi-page documents
- Transparency feature not supported under some browsers

Scientific “Presentation” Software

- Deneba Canvas X
 - Can allow for presentation of GIS data
 - Allows for image editing
 - Allows for DTP illustration and layout functionality
 - Supports over 80 graphical file formats for import and export

Conclusions

- Map data can be presented as a graphical file for use by the public
- Selection of file format will be important to retain resolution and minimize file size
- A widely-usable format is necessary
- PNG provides optimal flexibility
- Deneba Canvas X may be useful software for higher end users