



Ventsim Visual™

Mine Ventilation Software

Ventsim Software
www.ventsim.com

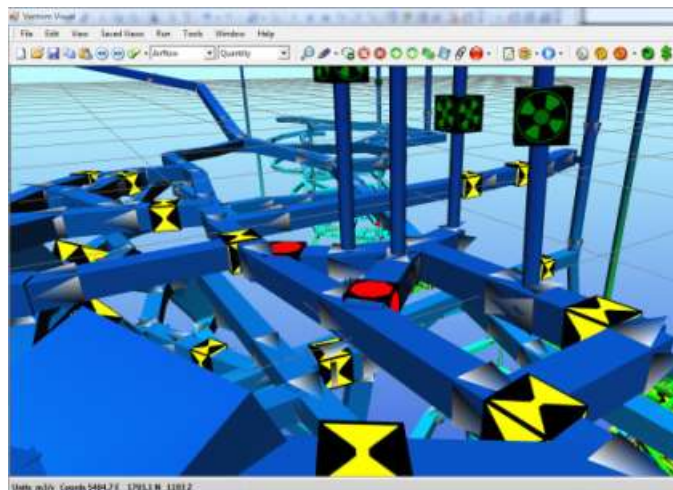
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Ventsim Visual™ Software Released

A new generation of mine ventilation design software Ventsim Visual™ has been officially released. More information regarding the new software and demonstration downloads are available from <http://www.ventsim.com/>

Ventsim Visual™ records, models, predicts and helps manage underground mine ventilation systems and costs. The release marks a new generation of ventilation software design, with fully integrated smooth 3D graphics, color and animation, combined with an easy to use mouse driven interface.

Ventsim Visual™ has a toolbox full of new features including thermodynamic simulation, compressible airflows and diesel particulate matter estimation, along with a host of other useful features. The soft-



ware also includes tools for emergency response, and managing and reducing ventilation costs. It comes with a comprehensive manual and examples.

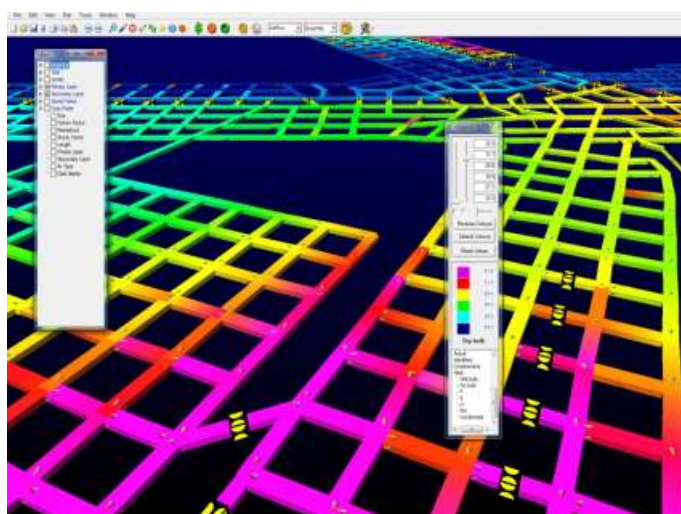
The 'Visual' aspect of the new software is guaranteed to change the way users view, design and analyze

ventilation circuits, with stunning 3D graphics, dynamic coloring, and real time flow animation now integral parts of the software interface.

Ventsim Visual software is available under a purchase license agreement or limited time rental.

Software Features

- Fully 3D graphics interface with scaled airway solids or wireframes.
- Superfast and smooth rotation and scaling regardless of network complexity.
- Color airways by flow, pressure, elevation, cost, heat and dozens of other data types for easy visual analysis and interpretation.
- Fully editable in 3D with a natural easy to learn 3D interface
- Many new features such as full thermodynamic heat simulation, economic airway size predictor, recirculation predic-



tor, and variable speed fans that can be switched on or off.

- Fully compatible with all of your Version 3 network models

- Import DXF graphics string files from CAD or mine planning software for easy network creation.

Two Ventsim Visual™ Versions Are Available

Standard Version

- Full 3D modeling
- Real-time animation of airflow and fans
- Dynamic coloring of airways and data
- Airflow simulation and fan modeling
- Contaminant spread, sourcing and emergency simulation
- Financial functions to analyze airflow and fan costs.

Advanced Version

- All the Standard features
- Thermodynamic heat and moisture modeling
 - Strata heat and moisture
 - Refrigeration
 - Diesel heat and emissions
 - Electrical heat sources
 - Oxidization

- Compressible airflows and different mine air densities and fan operating environments.
- Natural Ventilation
- Financial analysis wizards
- Recirculation predictor
- Diesel particulate simulation

For More Info visit

<http://www.ventsim.com/>

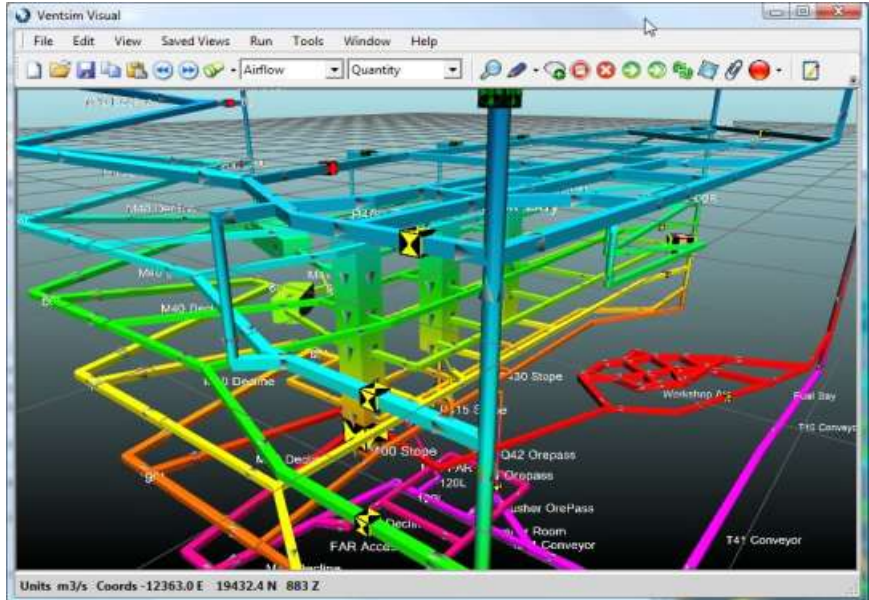
or email

admin@ventsim.com

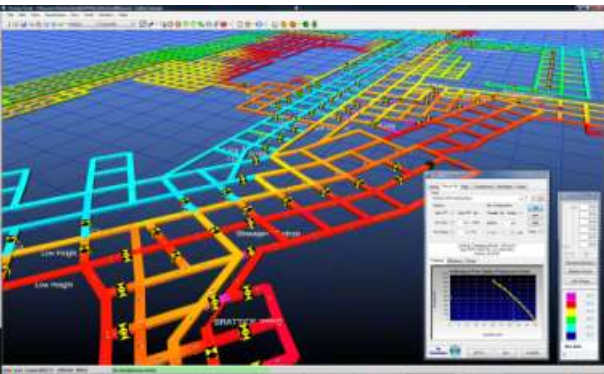


Ventsim Visual Screenshots

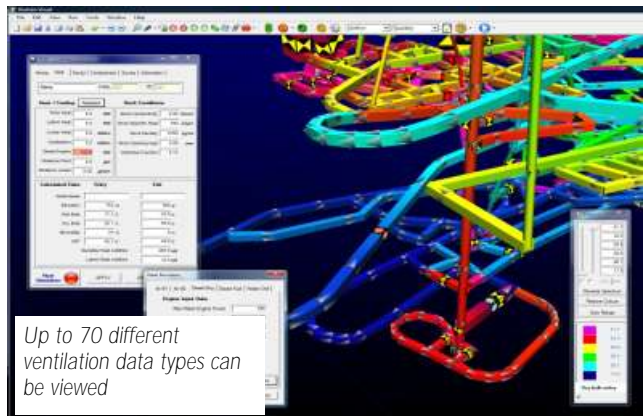
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1	40.0	2,100	2,125	40	100
2	52.0	2,000	2,042	45	120
3	60.0	1,900	1,956	50	125
4	70.0	1,750	1,826	60	130
5	80.0	1,550	1,650	68	140
6	90.0	1,325	1,451	74	140
7	100.0	1,100	1,256	71	135
8	110.0	850	1,039	65	120
9	120.0	550	775	60	100
10	130.0	1	264	57	70



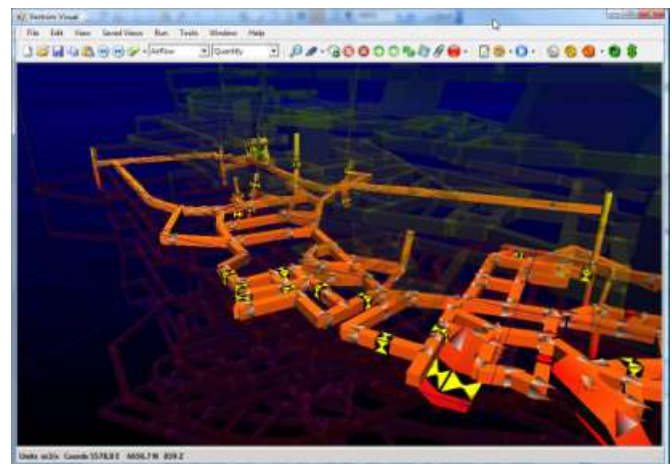
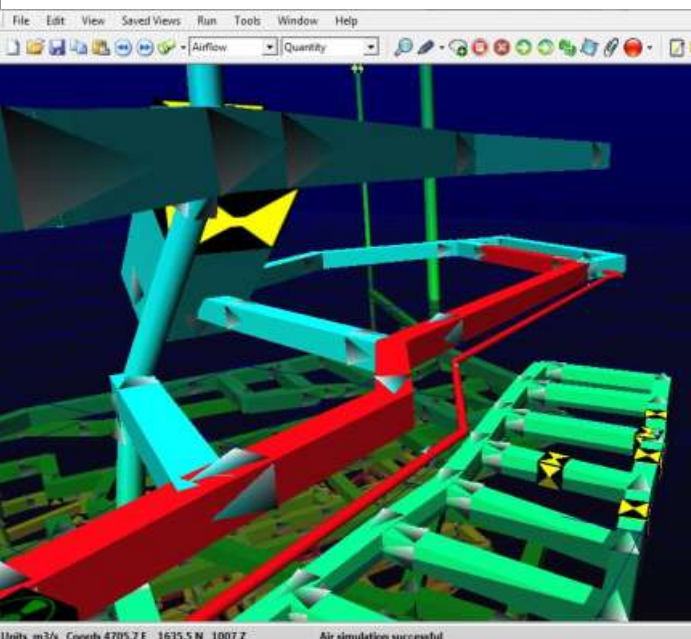
Fan modeling and duty point prediction



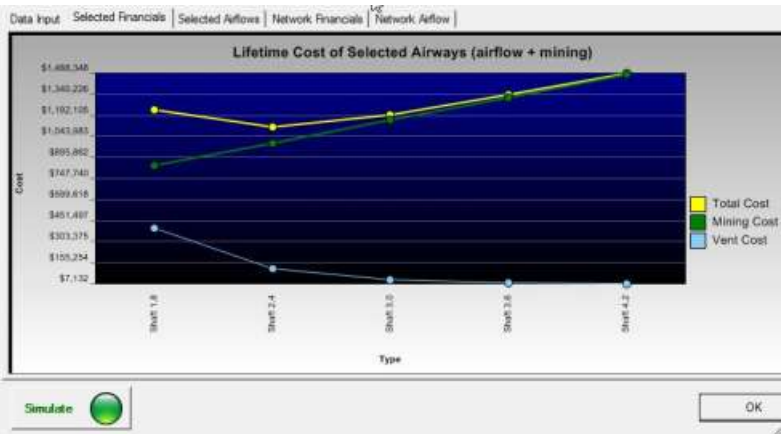
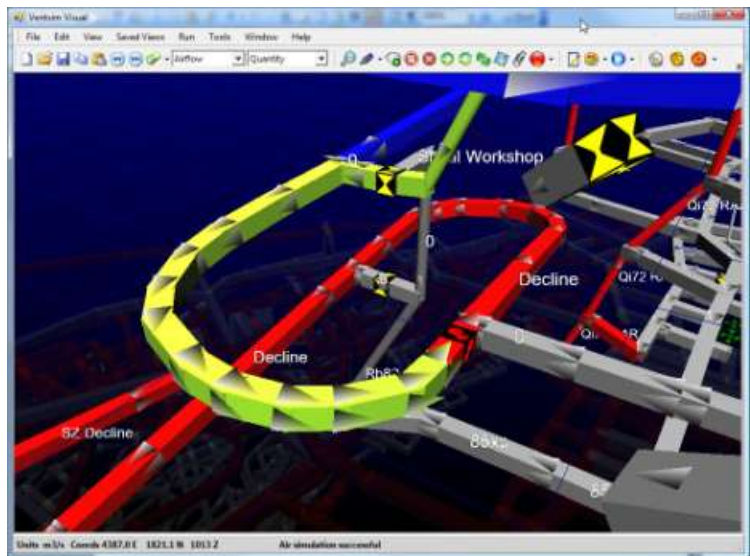
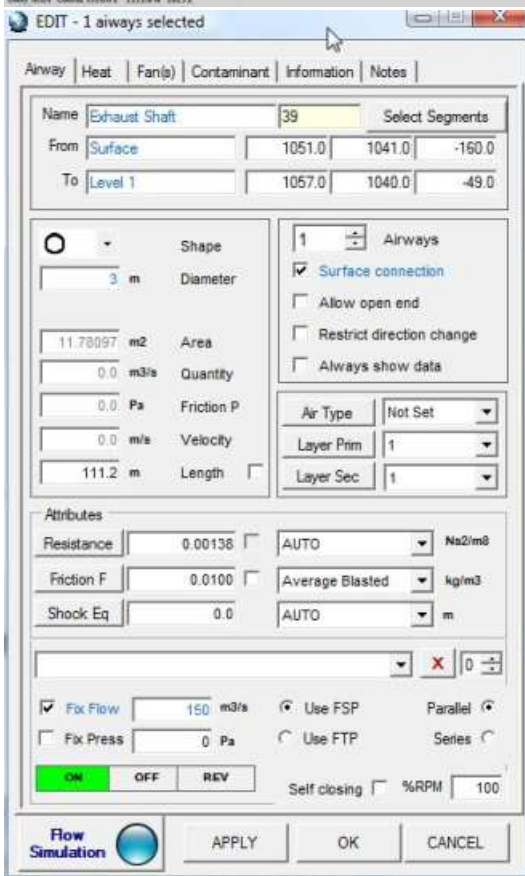
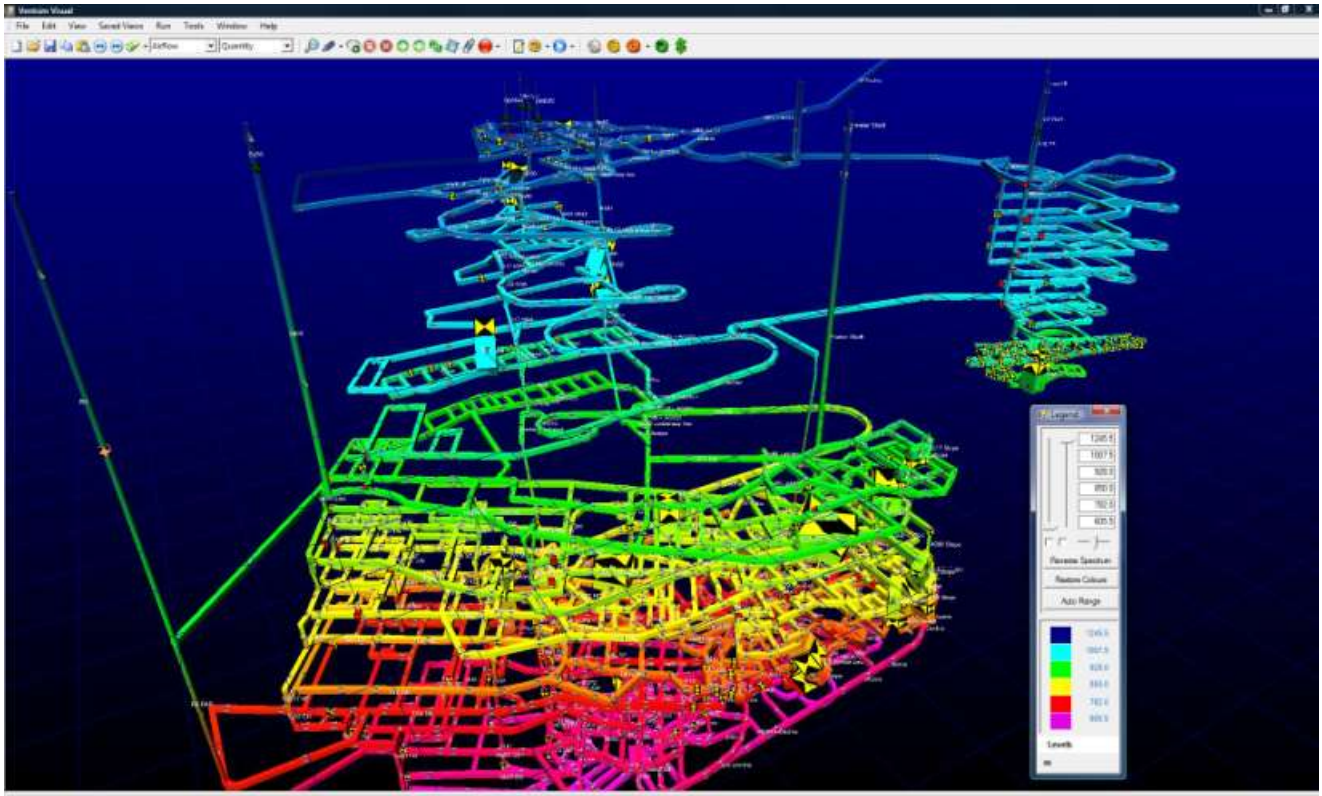
Thermodynamic simulation is as easy as pressing a button



Up to 70 different ventilation data types can be viewed



Complex data can be made transparent for easy viewing



TOP—complex mines designed up to 30000 airways
 LEFT—many options included to model airways—as detailed or as simple as you want it
 RIGHT—smoke tools included to find source of contaminants
 BOTTOM—Financial analysis tools to predict best airway size

Ventsim Software Products Comparison Guide

	Ventsim Classic	Ventsim Visual 1.0 Standard	Ventsim Visual 1.0 Advanced	Description
Graphics				
Graphics	3D Wireframe	3D Solid or Wireframe	3D Solid or Wireframe	Correctly sized airway graphics show true dimensions and shapes of airway
Non active display Option	Dark Color	Semi Transparent	Semi Transparent	Simplify display by making some airways transparent - levels can be varied
Hardware Acceleration		✓	✓	Fast, smooth 3D display of any complexity on most modern PCs and laptops
Animated Airflows & Fans		✓	✓	Show airflows travelling in real time (or multiple of) through network, operating fans spin
Units	SI Metric/Imperial	SI Metric/Imperial	SI Metric/Imperial	
DXF Import	✓	✓	✓	Import centrelines from any CAD package for rapid building of Ventsim networks
Undo function	✓	✓	✓	Unlimited undo and redo steps
Simulation				
Maximum Network Airways	30000	30000	30000	
Simulation Method	Single Pass HC	MultiPass HC	MultiPass HC Mass Flow	Hardy Cross - Multipass simulation improves accuracy and robustness
Airway reversing	manual	automatic	automatic	Airways with no exits or entries are automatically reversed to allow simulation to continue
Compressible Flows			✓	compressible airflows effects at depth are modelled
Coloured Data Display		✓	✓	Display any data by colour with adjustable legend and sliders
Ventsim Air Data Types	24	36	60	Number of calculated data type that can be shown on screen, colour legend or spreadsheet
Switchable Fans (on/off)		✓	✓	fans can be switched on or off and left in network - fan can be made self closing or open
Variable Speed Fans		✓	✓	Different fan speeds can be easily modified in network
Reversible Fans		✓	✓	Fans can be reversed with reduced performance (for emergency simulation)
Thermodynamic				
Heating and Cooling			✓	includes heat or re Fridgeration options in network analysis
Rock Thermal Input			✓	predicts heat and moisture emanated from rock strata
Diesel Equipment			✓	predicts heat and humidity generated by diesel equipment
Natural ventilation	manual	manual	automatic	Uses thermodynamics to simulate natural ventilation effects
Contaminant				
Distribution Prediction	✓	✓	✓	Distributes smoke or other contaminants through network
Sourcing Assistant	✓	✓	✓	Shows spread and possible source location of smoke or other contaminants
Sourcing Concentration		✓	✓	Shows upstream path and concentrations of contaminated (or fresh) airflow
Diesel Particulate Simulation			✓	Utilises diesel engine sources to estimate DPM levels throughout the mine.
Other Features				
Recirculation Detector			✓	Searchs network for paths that recirculate a portion of air
Economic Airway Size Predictor			✓	Automatically graphs airflow and costs through a range of different airway sizes and types
Auto Simulate		✓	✓	Automatically updates and simulates networks while being built or modified
File System	*.SIM (text)	*.SIM *.VSM *.TXT	*.SIM *.VSM *.TXT	Ventsim Visual versions can load V3.9 SIM files and convert to Visual VSM files
Import Data	Text, DXF	Text, DXF, VNETPC	Text, DXF, VNETPC	Ventsim can build networks from CAD or Mine Planning DXF files, or directly import VNETPC

