



Ventsim Visual™ Mine Ventilation Software

Ventsim Software
www.ventsim.com

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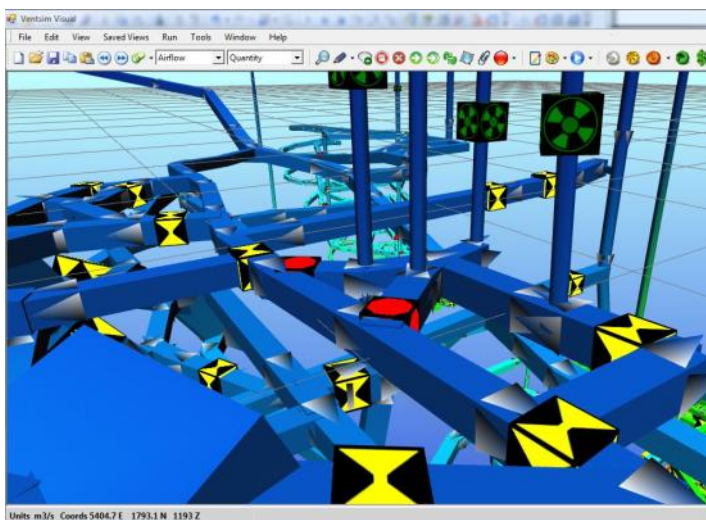
Ventsim Visual™ Version 1.1 Software Released

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. 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 estimation, along with a host of other useful features.

The software also includes tools for managing and reducing ventila-



tion costs, and is provided with a comprehensive 180 page electronic manual.

The 'Visual' aspect of the new software is guaranteed to change the way you view, design and analyze ventilation circuits, with color management and animation

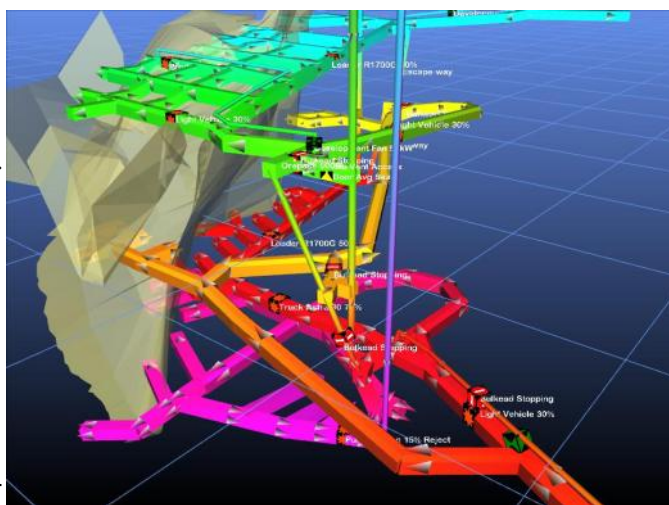
now integral parts of the software interface.

Ventsim Visual software is available under a purchase license 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 predictor, and variable speed fans that can be switched on or off.



- Fully compatible with all of your Ventsim Version 3 network models
- Import VnetPC files and DXF graphics files to quickly build

new ventilation networks.

- Import 3D solids graphics such as orebodies, terrain, surveyed development or any other 3D solids to view and provide guidance to your ventilation net-

Two Ventsim Visual™ Versions Are Available

Standard

- 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.
- Variable speed fans which can be reversed or turned off.

Advanced

- 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.
- Financial analysis wizards
- Recirculation predictor
- Diesel particulate simulation



Ventsim Visual Screenshots

Fans

Surface Fan (180 kW)

Diameter 4.2 Reverse P 0.5

RPM 0 Reverse Q 0.5

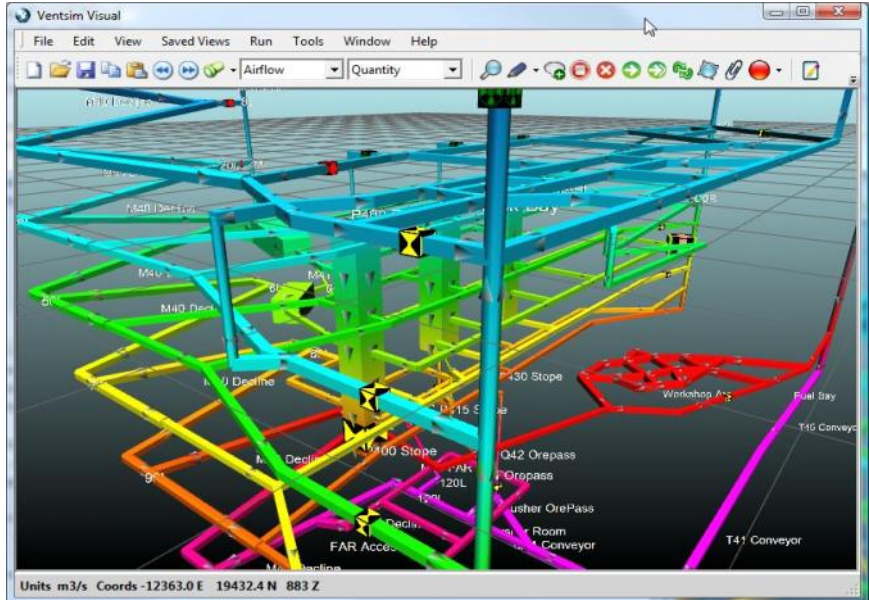
Air Density 1.20 kg/m³

Fans blades set to 22 degrees

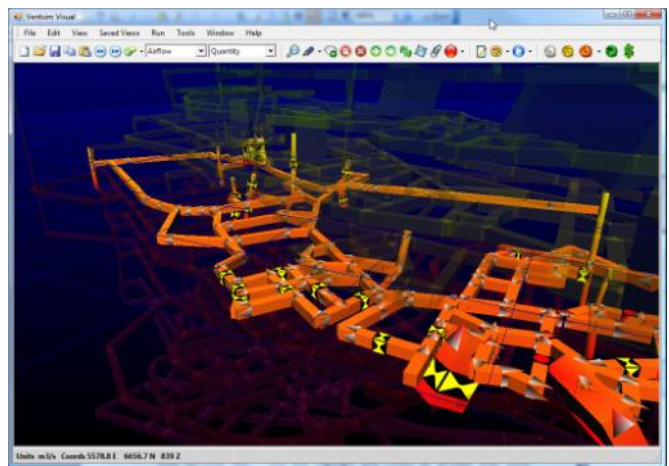
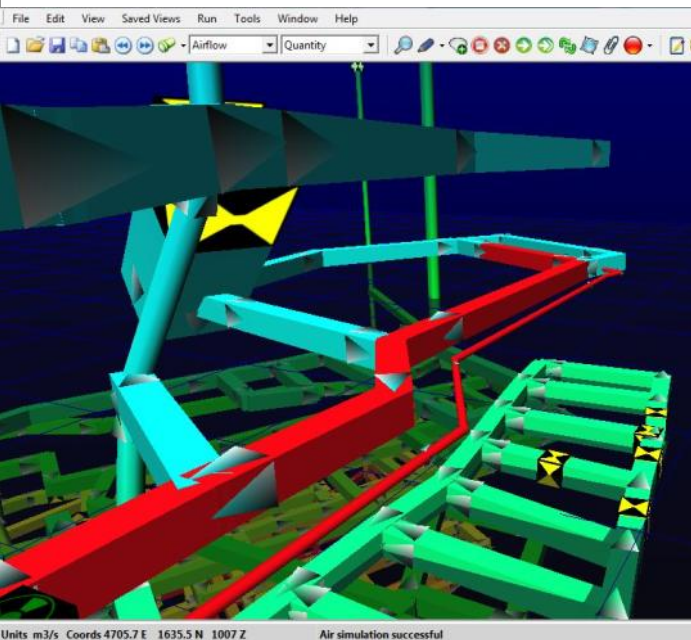
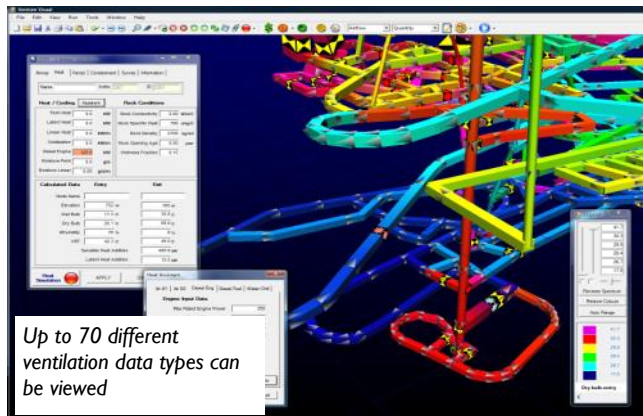
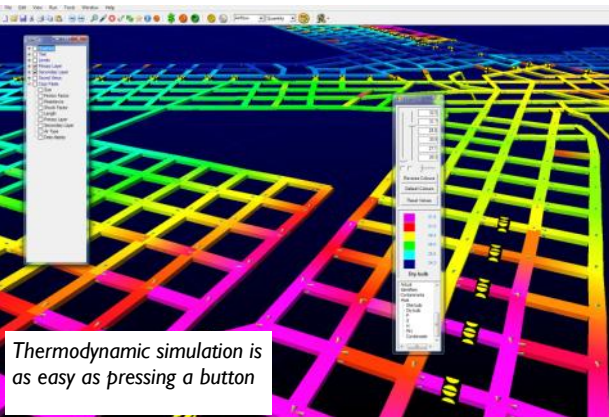
Point	Quantity m ³ /s	Fan Static Pressure Pa	Fan Total Pressure Pa	Fan Total Efficiency %	Absorbed Power kW
1	40.0	2,100	2,125	40	100
2	52.0	2,000	2,042	45	120
3	60.0	1,900	1,956	50	125
4	70.0	1,750	1,826	60	130
5	80.0	1,550	1,650	68	140
6	90.0	1,325	1,451	74	140
7	100.0	1,100	1,256	71	135
8	110.0	850	1,039	65	120
9	120.0	550	775	60	100
10	130.0	1	264	57	70

Fan Surface Fan (180 kW)

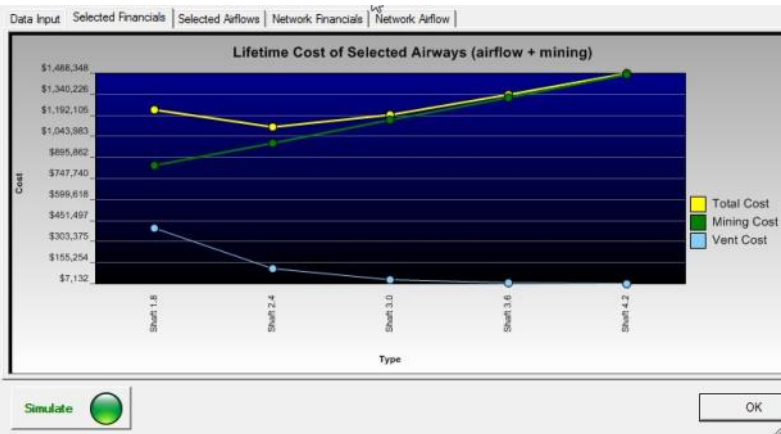
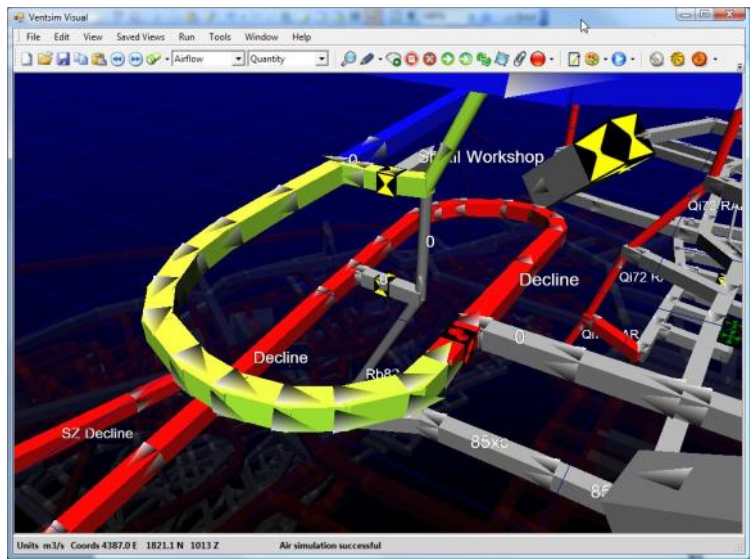
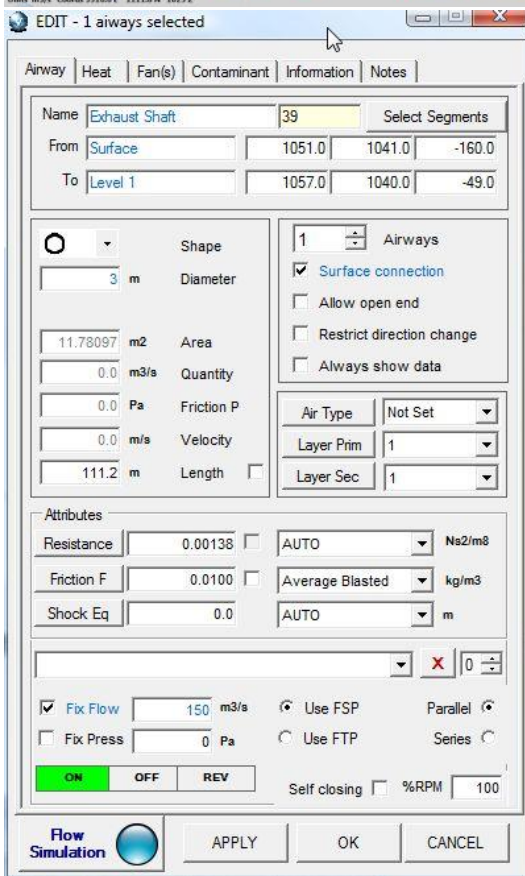
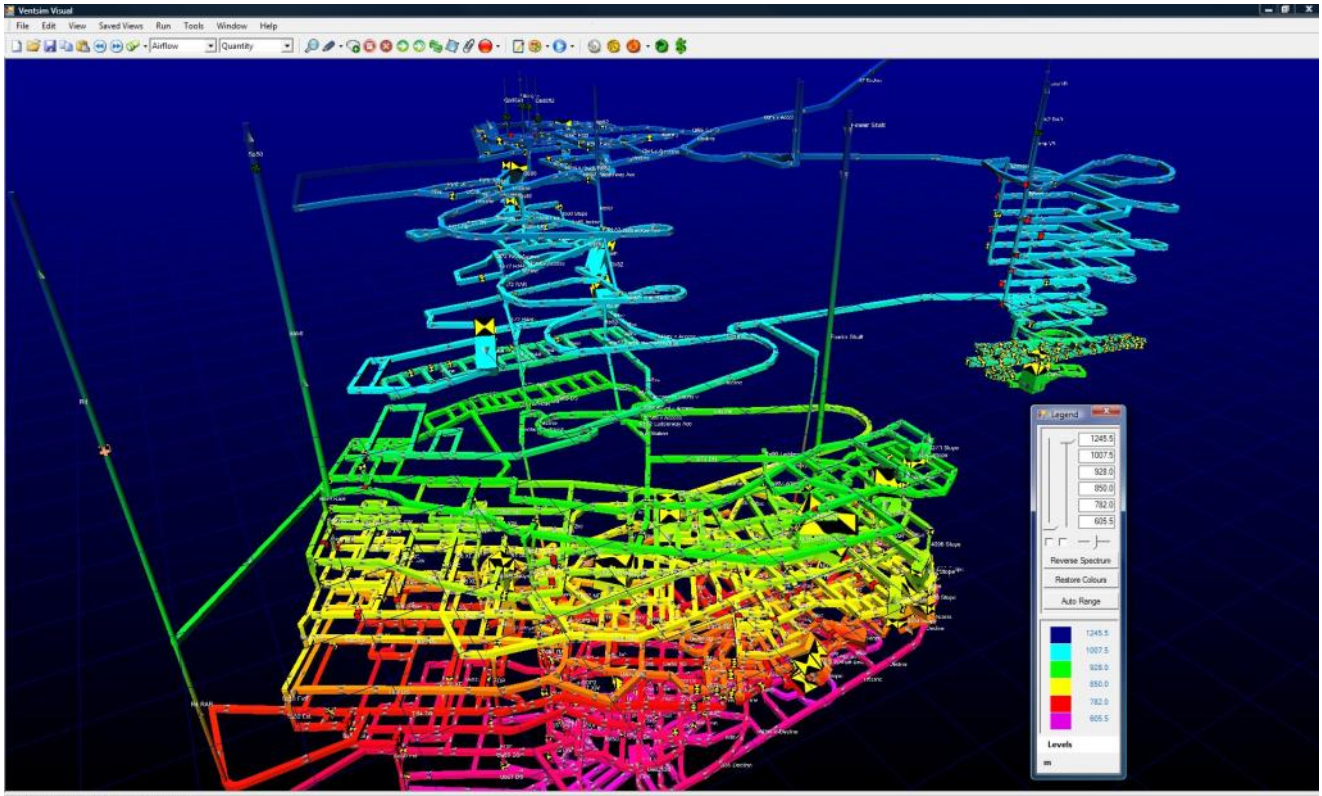
Consolidate Data Points OK CANCEL



Fan modeling and duty point prediction




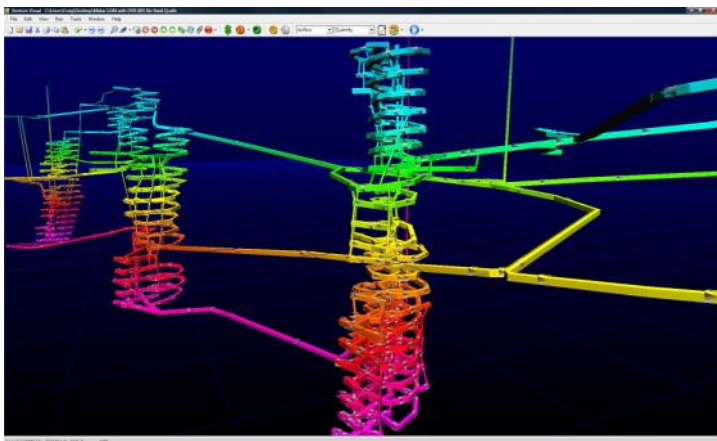
Complex data can be made transparent for easy viewing



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 3.9 Professional	Ventsim Visual 1.0 Standard	Ventsim Visual 1.0 Advanced
Graphics			
Graphics	3D Wireframe	3D Solid or Wireframe	3D Solid or Wireframe
Non active display Option	Dark Color	Semi Transparent	Semi Transparent
Hardware Acceleration		✓	✓
Animated Airflows & Fans		✓	✓
Units	SI Metric/Imperial	SI Metric/Imperial	SI Metric/Imperial
DXF Import	✓	✓	✓
Undo function	✓	✓	✓
Simulation			
Maximum Network Airways	30000	30000	30000
Simulation Method	Single Pass HC	MultiPass HC	MultiPass HC Mass Flow
Airway reversing	manual	automatic	automatic
Compressible Flows			✓
Coloured Data Display		✓	✓
Ventsim Air Data Types	24	36	60
Switchable Fans (on/off)		✓	✓
Variable Speed Fans		✓	✓
Reversible Fans		✓	✓
Thermodynamic			
Heating and Cooling			✓
Rock Thermal Input			✓
Diesel Equipment			✓
Natural ventilation	manual	manual	automatic
Contaminant			
Distribution Prediction	✓	✓	✓
Sourcing Assistant	✓	✓	✓
Sourcing Concentration		✓	✓
Diesel Particulate Simulation			✓
Other Features			
Recirculation Detector			✓
Economic: Airway Size Predictor			✓
Auto Simulate		✓	✓
File System	*.SIM (text)	*.SIM *.VSM *.TXT	*.SIM *.VSM *.TXT
Import Data	Text, DXF	Text, DXF, VNETPC	Text, DXF, VNETPC



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