

# EquipTutamen™

## An Online HVAC Diagnosis and Prognosis System

### The Importance of Indoor Air Monitoring

Nowhere is indoor air monitoring more important than in hospitals, hotels and office buildings. Good ventilation/air filtration is a part of controlling air contaminants. Appropriate control of airflow through HVAC is essential in preventing the spread of germs and protecting people from undue harmful exposure.

### Protect Equipment and Assets

Tutamen means protection in Latin. As the name implies, EquipTutamen™ protects your valuable HVAC system equipment and provides a better way to manage your business assets. The HVAC systems in hospitals, hotels and office buildings are quite expensive. Through monitoring the operating conditions 24/7, indoor air quality can be effectively maintained.

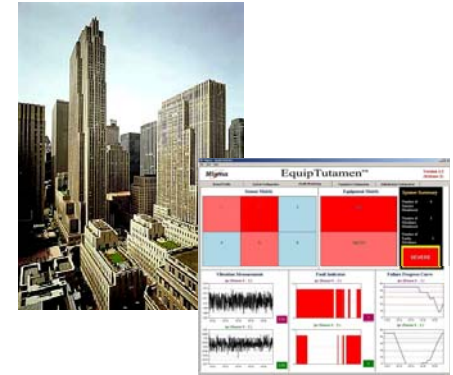
EquipTutamen™ can continuously monitor pumps, condensers, fans and compressors of the existing HVAC system through various sensors. This is especially critical when monitoring the status of older HVAC systems. EquipTutamen™ detects irregularities of the sensing signals and reports the various levels of severity of faults from warning to fatal. Earlier detection can effectively prevent deterioration of air quality and unscheduled shutdown; therefore, maintenance cost can be

dramatically reduced. Monitoring and early detection will improve the extended normal operation of existing HVAC systems.

In the current product offering, sensors are installed at compressors, pumps and fans. HVAC systems in different locations within a building can all be networked through robust wireless communication and alerts can be sent via emails and text messages.

### Features

- Patented cluster trend technology for reliable monitoring
- Accurate failure indicator and alarm management
- Estimation of equipment performance degradation index (PDI)
- Capable of processing data with missing data segments
- Processing as many as 100 contact points simultaneously
- Monitoring multiple HVAC systems simultaneously
- Highly secured computer network via domain separation
- Highly secured wireless network via physical layer authentication
- Seamless integration with existing enterprise monitoring systems
- Email and text message notification of alerts
- Remote configuration and monitoring
- Lower cost per contact point



### What do we offer in our monitoring system?

- Rugged industrial PC with embedded monitoring algorithms
- Sensing system with wireless capabilities
- User friendly GUI compatible with Windows 98, 2000, XP
- Secured wired and wireless network
- Remote troubleshooting and technical support

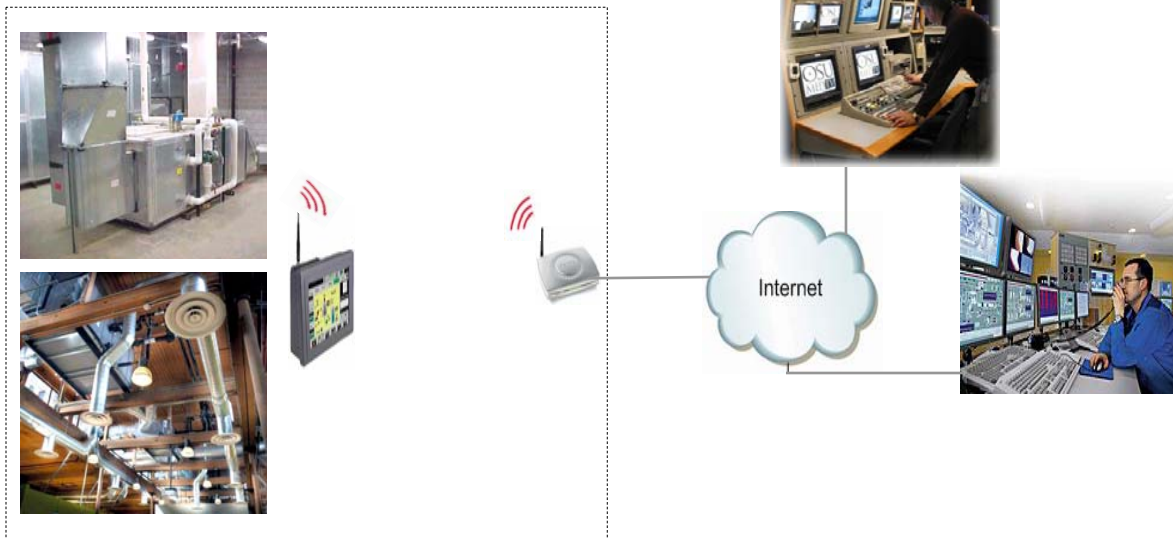
### What equipment can we monitor?

Any types of compressors, pumps, and fans of the HVAC systems in your facility. EquipTutamen™ is powered by our patented technology that is totally data driven both for diagnosis and prognosis.

### What types of sensors can we use?

Any sensors, as long as they provide good diagnostic information. If your equipment does not have sensors available, our experts will install sensors at the right places of the HVAC systems.

# HVAC Monitoring



## Indoor Air Quality 24/7

### Benefits:

- √ 24/7 monitoring operating conditions
- √ Early detection—assessing the performance of the HVAC system
- √ Non-intrusive sensing
- √ Preventing unscheduled shutdown
- √ Protecting financial well-being of your business

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