

*Open Systems or proprietary protocols*

*Serial or IP based*

*Leverage new technology*

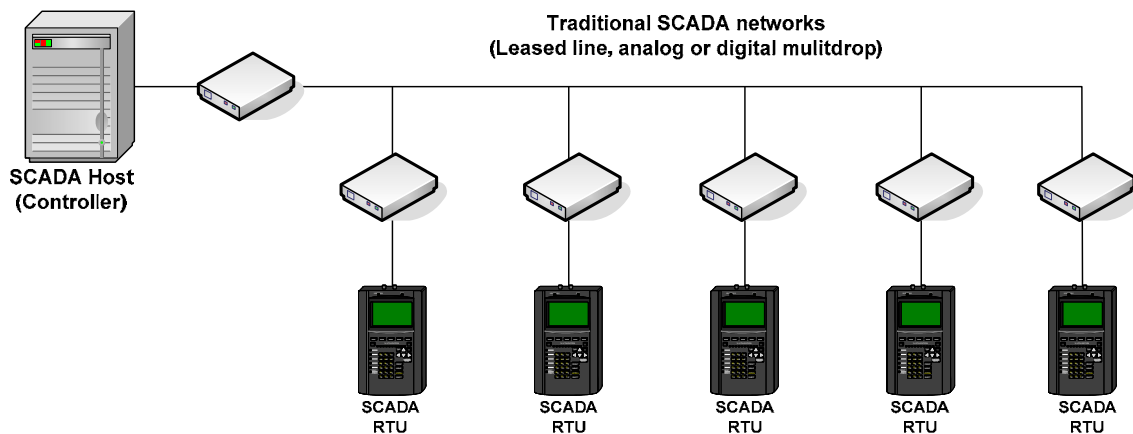
*Reduce monthly recurring telco costs*

*Support multiple devices per site*

*Vanguard Networks has a solution!*



Supervisory control and data acquisition (SCADA) applications allow users to monitor and control various remote functions and processes. Traditional SCADA networks are designed using leased line point-to-point, or multipoint circuits which allow the master controller to poll each slave in a predefined order. Through this process, the master can oversee the slaves' control, maintain the process, and react to changes at the remote sites.



The network is the infrastructure over which the SCADA systems control a wide range of remote terminal units (RTUs) and programmable logic circuits (PLCs) using proprietary and industry standard protocols, such as DNP3, ModBUS, Motorola's MOSCAD, and Allen-Bradley's DF1, as well as some of the newer systems which are IP based.

SCADA systems can be relatively simple, such as one that monitors the environmental conditions of a small office

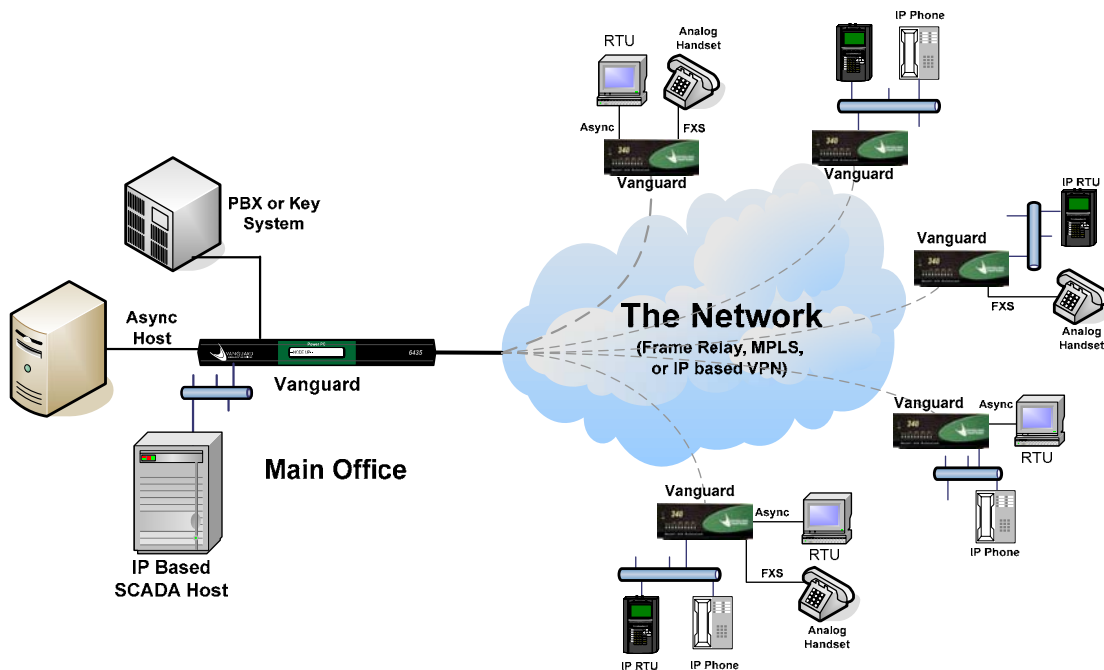
building, or incredibly complex, such as a system that monitors all the activity in a nuclear power plant or the activity of a municipal water system.



Vanguard Networks provides converged network solutions deploying emerging transformation technologies to integrate voice, data, and video over a single network combining the latest architectures such as MPLS, Broadband VPN, and SIP Trunking to take advantage of the tremendous cost savings and value added services offered today. The Vanguard advantage enables non-IP SNA, SCADA, and serial data and voice access into these heretofore IP-only networks as an element of the IP convergence solution.

Vanguard Networks' suite of multiservice gateways provide a unique solution to the Utility industry; one that integrates existing half-duplex SCADA processes with newer IP-enabled processes, and eliminates costly leased line circuits with a more flexible and functional packet-based network (Frame Relay/MPLS/VPN). That in turn facilitates the integration of other traffic types, like voice - and Vanguard gateways offer a full complement of analog and digital voice features, as well as voice over IP (VoIP). Thus, utility companies can further reduce their monthly recurring telco charges by eliminating the voice line at remote, unmanned substations.

So the traditional SCADA leased line network would now look something like this.





## Networking Solutions from Vanguard

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## Services

### System Support

Vanguard Networks support services range from web-based services that provide access to our knowledge base, diagnostic tools, software and system fixes – to extensive remote and on-site expertise, combined to solve customer problems expeditiously.

The Vanguard Networks Customer Service Center is a single point of access to multiple levels of resources where problems are escalated appropriately to the most efficient skill set to handle each problem. Whether your network problem requires investigation by a software specialist or 4-hour on-site parts delivery, everything is coordinated from that first call.

### Network Implementation

For over three decades, Vanguard Networks has helped thousands of customers implement successful cost effective networks. We have seamlessly managed over one hundred daily network installations, all without impacting revenue-generating core business objectives. When you've got critical time scales for deployment, count on Vanguard Networks.

With our best in class network implementation services, you'll get a team of experienced professionals to integrate your network from start to finish. You'll retain ultimate network control, while benefiting from the knowledge and support of our specialists.

**For more information email [Sales@VanguardNetworks.com](mailto:Sales@VanguardNetworks.com).**

**[www.vanguardnetworks.com](http://www.vanguardnetworks.com)**

**Vanguard Networks  
25 Forbes Boulevard  
Foxboro, MA 02035  
+1-508-964-6200**