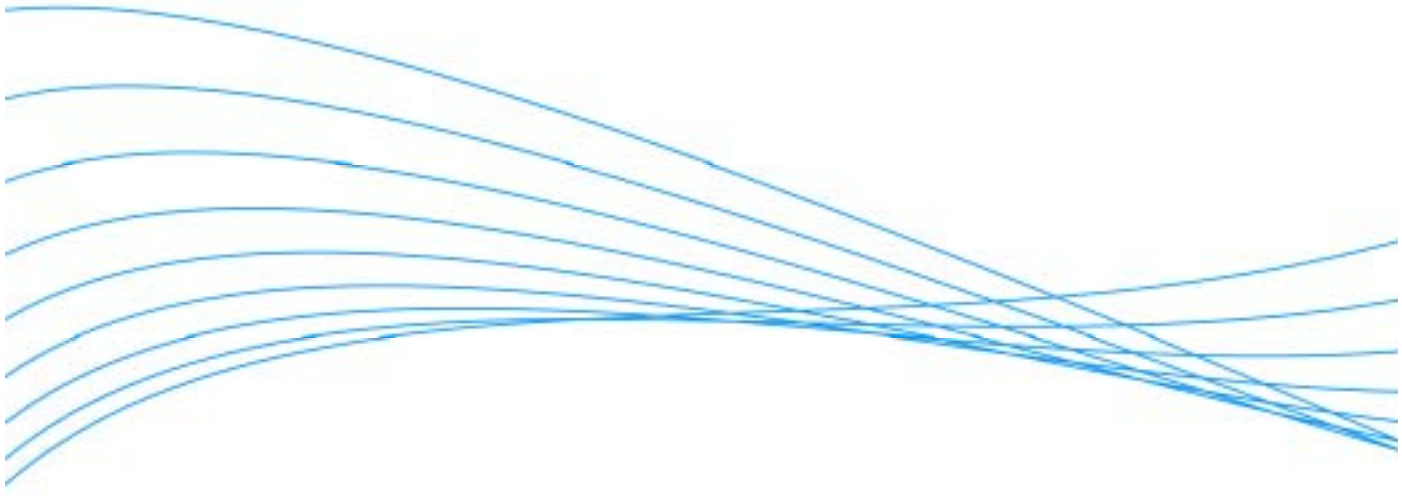




ProCurve and Mitel Convergence Solution Brief



Introduction	2
ProCurve and Mitel: A true partnership.....	2
Driving technological developments	2
Voice over Wi-Fi.....	4
Supporting customers	4
Joint success stories	5
Sunshine Valley Ski and Snowboard Resort	5
Al Madina Press Establishment	5
Sample topology	6
Summary.....	7
For more information	7

Introduction

The adoption of VoIP is a natural and logical evolution for many businesses. Conventional telephony systems are not only costly but they fail to meet the increasing demands that organizations place on their communication infrastructure.

Organizations are increasingly turning to VoIP not simply as a means to reduce their communication costs but also as a way to modernize their businesses and drive new revenue streams. With VoIP, businesses can unite multiple offices with a single phone system and eliminate long-distance charges between sites. Additions, moves or changes to the phone system can be done quickly and easily. Workforce productivity can be improved, especially for mobile employees and access to corporate resources can be extended to all, wherever they may be. In addition, VoIP services and applications can enable new and flexible methods of communications and collaboration within a business.

VoIP is now a viable and attractive opportunity that will one day replace the traditional phone system completely. The adoption of VoIP is no longer a question of "if" but "when". However, the deployment of VoIP is not a simple step. Businesses must give careful consideration to the type of VoIP system that will best meet their requirements and to the partners that they choose to deliver this solution.

ProCurve Networking and Mitel Networks have formed a strategic partnership aimed at delivering world-class IP unified communications solutions. The teaming of ProCurve – market leader in standards-based networking – and Mitel Networks – a market leader and pioneer in the world of IP communications, offers a unique, best-of-breed, end-to-end communications solution that encompasses components, services, and support.

Mitel has over 30 years' experience delivering innovative and robust communications solutions and ProCurve has been driving open standards and leading the market in data networking for over 25 years. The companies' combined offering incorporates the ProCurve Adaptive EDGE Architecture™ and Mitel's advanced product line of IP PBXs, IP phones and IP applications. The resulting unified communications solutions deliver a wide variety of enhanced benefits including advanced solution integration, superb functionality in areas of network management, security and enterprise mobility and the optimization of design, engineering and implementation processes.

ProCurve and Mitel: A true partnership

ProCurve Networking and Mitel have a strong, long-standing partnership which touches all aspects of their respective organizations. It is not purely a commercial relationship, it is also a proven and innovative technological partnership.

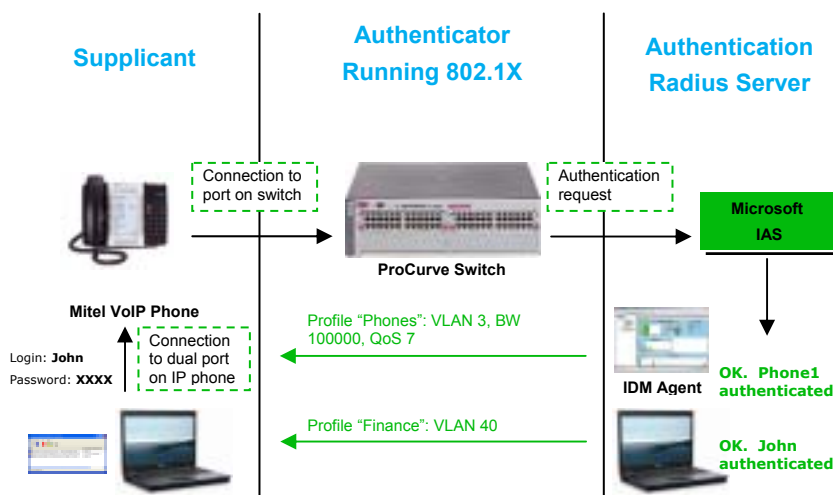
Driving technological developments

This technological partnership is demonstrated by a joint commitment to the development and deployment of true open industry standards. Together ProCurve and Mitel have driven many powerful technological developments that help to address some of the challenges that businesses face today. Here are examples of three critical, breakthrough technologies that deliver real customer benefits:

IEEE 802.1X – This is a simple, standards-based mechanism that performs secure logon ensuring that only authenticated and verified users/devices can access network resources. The 802.1X mechanism allows you to transform your network from being completely open to one where the ports are closed by default, until opened by an authenticated user or device. It then uses the 802.1X logon of the device, or user, as a means of authentication prior to granting access to the network. ProCurve has worked closely with Mitel to build 802.1X support into Mitel's IP phones ensuring that wherever they are connected to the network they can be identified, verified against a centralized (Radius) database and then granted or denied network access.

However, VoIP phones typically have a second IP networking port through which other devices, such as a notebook, may be connected to the network. This poses serious security concerns. ProCurve switches address these concerns by supporting multiple 802.1X sessions simultaneously on each port. So, for example, the first session can authenticate an IP phone and the second, a notebook connected via this phone. This effectively ensures that the same level of security can be extended to any device connected to the network via VoIP phones. Once the identity of both the device and the user has been established, the network can be adapted to deliver different services. These services are dependent upon profiles held on the Radius server which are, in turn, managed by ProCurve's IDM software.

Per Port Multiple Sessions 802.1X



LLDP-MED - Link Level Discovery Protocol - Media Endpoint Discovery is an extension to the existing LLDP (IEEE 802.1ab) standard and addresses the unique demands of video and voice in a converged network. The workgroup for this new technology was initiated by ProCurve Labs in order to focus better on customer VoIP requirements. Both ProCurve and Mitel played a pivotal role in driving this open industry standard and were among the first to market with solutions based on LLDP-MED. The standard has subsequently been adopted at a rapid pace and has been implemented by the majority of network industry players. LLDP-MED is a milestone for multi-vendor VoIP environments, it offers notable technological benefits and helps to significantly reduce operational costs:

- **Device location discovery:** With traditional PBX telephony systems it is possible to trace the physical origin of calls. The nature of VoIP, however, makes this very difficult. LLDP-MED enables the IP phone, or any other multi-media device, to obtain its physical location information automatically upon connection to the network. This is, for example, vital for reporting the location of a user making an emergency call.

- **Plug-and-play provisioning:** Eliminates the need to manually configure the phone or switch port when deploying new IP phones, or for any subsequent moves, additions and modifications. This not only reduces operator and configuration errors but it also makes initial deployments and subsequent changes significantly quicker, reducing the total cost of ownership of the whole IP communications infrastructure.
- **Detailed inventory management:** Allows network administrators to track their VoIP devices. The Ethernet switch collects model, manufacturer, software, firmware and asset information, thereby simplifying the management and maintenance of inventory.
- **Advanced PoE functionality:** The current PoE standard (IEEE 802.3af) provides a maximum of 15.4 watts per port and allows IP devices to receive power as well as data over existing LAN cabling. However it is likely that the standard wattage supplied by PoE will increase and that more power-demanding devices and appliances will need to be supported. With this in mind, LLDP-MED enables phones and other devices to manage power consumption more effectively, for example fine-grained power allocation and endpoint power priority settings.

The above features and functionality are of enormous value to businesses. There are, of course, alternative solutions available from other very large players in the VoIP market. Although another form of discovery protocol exists it has serious security short-comings. It is based on proprietary technology that actually bypasses the 802.1X mechanism and it is very easy to spoof. Even when LLDP-MED support is added to phones that traditionally support this proprietary discovery protocol, the phone functionality is so intrinsically linked into this original protocol that many features will be compromised when operating with LLDP-MED.

Voice over Wi-Fi

ProCurve and Mitel also have a very strong combined wireless telephony offering enabling organizations to leverage their wireless LAN infrastructure investment for both voice and data. Mitel offers a range of Wi-Fi handsets based on pioneering Spectralink technology that operates on the industry standard 802.11a/b/g protocol. ProCurve switches can deliver a Wireless Edge Services Module (WESM) solution. WESM enables full integration of Wi-Fi and wired, with one management platform providing unified management and control of services. This combined ProCurve/Mitel solution ensures that Voice over Wi-Fi is a logical extension of the network delivering advanced functionality to the mobile user throughout the workplace. These solutions are very popular in the medical world because the radio frequency (RF) power used for communication is low, hence it is non-invasive and reduces the risk of interference with medical equipment.

Supporting customers

ProCurve and Mitel are both firmly committed to supporting their joint customers. As many of their solutions are sold by channel partners, both companies have numerous measures in place to ensure that customers are served by a trained, competent and certified channel.

To provide enterprises with increased levels of interoperability and performance from their converged network, ProCurve and Mitel have entered into an agreement that ensures comprehensive pre- and post-sales support for their customers. Procurve and Mitel engineers are cross-trained and fully capable of maintaining each other's products. Engineers from each company use the other's hardware when testing their products and solutions in order to ensure the highest possible levels of interoperability. Customers can also benefit from free customized network design and configuration services from Procurve Network Design Centre.

This relationship also extends to the channel. ProCurve Elite Partners and Mitel PremierPARTNERS are factory trained and certified to integrate ProCurve networking and Mitel IP telephony seamlessly into new and existing infrastructures. Their joint partners are backed by both companies' factory support centers which provide end-to-end support on solutions from ProCurve and Mitel.

This solid, established partnership enables customers to deploy an all-inclusive, converged communications solution with confidence. In addition, most ProCurve products have an industry-leading, lifetime warranty that includes next-business-day advanced replacement and free software updates for as long as the customer owns the product.

Joint success stories

Here are some examples of how ProCurve and Mitel provide solutions that help real businesses to solve real problems and thereby gain a business advantage

Sunshine Village Ski and Snowboard Resort

Sunshine Village Ski and Snowboard Resort sits atop the Continental Divide in Canada's Banff National Park. It is a bustling, self-contained community that serves half a million skiers and tourists every year. Sunshine Village required a wide-ranging technology infrastructure that could support and boost the performance of their diverse operations. The solution chosen was a comprehensive network based on ProCurve's Adaptive EDGE Architecture using routing switches at the network core and ProCurve switches at the edge. "We reviewed several Tolly Group reports that suggested ProCurve technologies are as good, if not better, than the other leading solutions on the market. The report, in conjunction with ProCurve's outstanding cost per port, was very compelling," commented Jon Chestnut, Director of Information Technology, Sunshine Village Ski and Snowboard Resort. This high-performance infrastructure facilitates a single IP network for voice, video and data enabling the resort to support its diverse operations, including retail sales, hotel operations, telecommunications and video surveillance. The system also incorporates a Mitel IP communications solution based on the Mitel 3300 ICP architecture, which has dramatically reduced call charges, provides secure Internet connections for guests and has improved overall communication. Furthermore, the lifetime warranty and customer service offered by ProCurve is a significant plus for Sunshine Valley. "ProCurve's phenomenal support continues to blow us away. It's absolutely unmatched," said Chestnut. "Free firmware upgrades with new features are always coming out".

- Read more: www.hp.com/rnd/case_studies/sunshine_village.htm

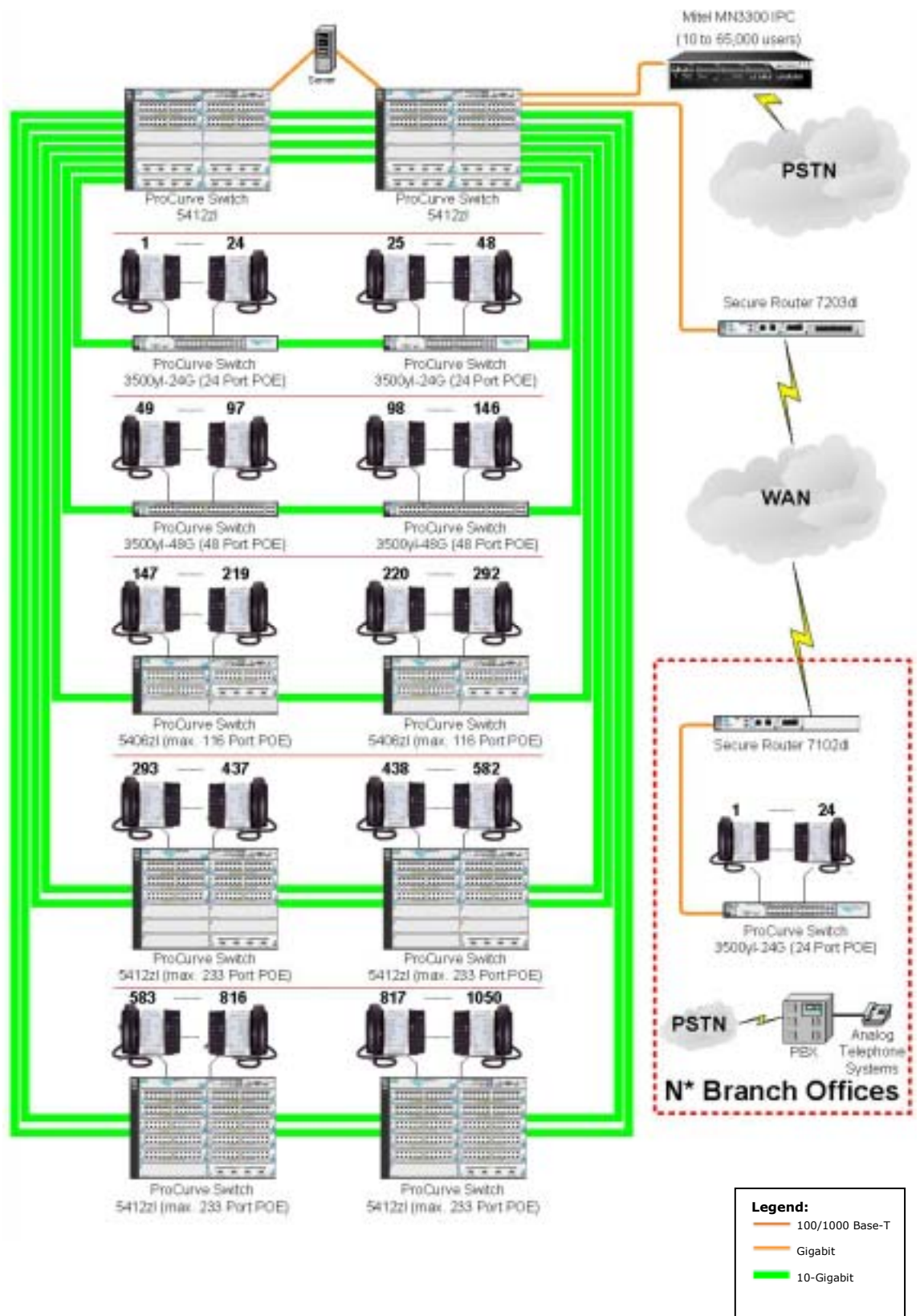
Al Madina

Al Madina Press Establishment is a prominent Saudi media group publishing newspapers and magazines and operating a thriving commercial print business. Good communication is vital in this market and to maintain a competitive edge, Al Madina recognized the need to replace their existing costly, outdated and inefficient communications system. Their response: to build a totally new IT infrastructure for their entire company which included a converged voice and data communication system from ProCurve and Mitel. "We wanted an infrastructure that could provide us with the 10Gb solution we needed. ProCurve Networking supported that better than any other supplier," said Hisham Zahid, Deputy Managing Director, Al Madina, Saudi Arabia. The ProCurve solution worked extremely well with Al Madina's applications in VoIP and the company was also impressed with the level of service offered by ProCurve. The new network included distribution switches (ProCurve 6410 switches) and client-side switches (ProCurve 3400cl series) as well as over 40 ProCurve 420 Wireless Access Points deployed throughout all Al Madina sites. Every reporter and every office can now gain direct PC access to major company services, including TV, and can communicate no matter where they are. The solution from ProCurve is adaptable, easy to manage and offers excellent price/performance ratio. Al Madina is now at the forefront of communications technology with a real competitive advantage.

- Read more: www.hp.com/rnd/case_studies/al-madina.htm

Sample Topology

The diagram below provides an example of a wide VoIP installation. This combines ProCurve switches and a Mitel ICP telephony solution to support over 1,000 VoIP telephones across multiple sites.



Summary

The many compelling advantages of VoIP over conventional telephony systems are encouraging businesses to adopt IP telephony at a fast pace. Organizations recognize the possibility of reducing their communication costs, innovating their businesses and driving new revenue streams while guaranteeing the highest call quality. However, to ensure that VoIP deployment is successful, it is critical to select the right partner.

ProCurve and Mitel deliver a best-of-breed, end-to-end communications solution that has proved to be among the industry's best for voice quality, reliability, scalability and ease-of-use. Their strong and long-standing partnership ensures the seamless integration of their solutions and their approach to customer support.

Together ProCurve and Mitel provide a rich combination of client and management level security, attack resiliency and other security tools, for example, server based SSL encryption and VLANs. With integrated PoE, powerful QoS features and industry leading lifetime, next-business-day advance replacement warranty, ProCurve represents a safe and flexible investment. Furthermore, ProCurve and Mitel's IP solutions are fully interoperable, robust and based on open industry standards.

ProCurve and Mitel have delivered and will continue to develop many powerful developments in the area of VoIP. Technological breakthroughs such as LLDP-MED help to address some of the challenges that businesses face today, thereby delivering real customer benefits.

By combining knowledge, expertise and experience, ProCurve and Mitel enable customers to make the right choice whatever their business needs.

For more information

ProCurve Networking product overviews

- www.hp.com/rnd/products/switches/ProCurve_Switch_3500yl-5400zl_Series/overview.htm (ProCurve Networking Switch 3500yl/5400zl series)
- www.hp.com/rnd/products/switches/switch2600series/overview.htm (ProCurve Networking Switch 2600 series)
- www.hp.com/rnd/products/switches/switch5300xlseries/overview.htm (ProCurve Networking Switch 5300xl series)

ProCurve Networking convergence solutions

- www.hp.com/rnd/solutions/convergence.htm

ProCurve Networking Design Center

- www.hp.com/rnd/design_center/index.htm

White papers

- www.hp.com/rnd/library/whitepapers.htm (ProCurve Networking)

ProCurve/Mitel announcements

- www.hp.com/rnd/news/procurvemitel.htm

Mitel

- www.mitel.com

To find out more about
ProCurve Networking
products and solutions,
visit our Web site at

www.procurve.eu



© 2007 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

4AA1-8797EEE, 07/2007