

Beyond DOCSIS: Providing High-Quality Cable Services in MDUs

Hybrid fiber coax networks aren't naturally suited to high-density, high-turnover properties like student housing. Service platforms like the Korcett help providers provision and manage HFC-based Internet services in these properties.

By David Daugherty, Korcett Holdings

Oliver Wendell Holmes Sr. observed that “man’s mind, once stretched by a new idea, never regains its original dimensions.” As it turns out, the observation was a prophetic one for the telecommunications marketplace. Over the course of several decades, we have watched the telecom marketplace move from “plain old telephone service” to converged voice, data and video services, passing through a violent evolutionary sequence of “new ideas” that stretched the shape of then-current thinking to accommodate new technologies. Today, it is the cable companies that are struggling to cope with a new generation of communications applications.

The emergence of a growing list of Internet-based services like VoIP, as well as the demand for wireless Internet access (WiFi), has transformed the communications marketplace. Unfortunately, because cable was not designed as a future-proof infrastructure, it typically requires significant upgrades to support these new and demanding communications services. In addition, cable companies, like telephone companies, are financially motivated to milk their existing infrastructure for profits rather than to meet the ever-increasing demands for new services. So it shouldn’t be surprising that cable companies tend to propose cable-modem technology for nearly every application.

Hybrid fiber coax (HFC) networks have evolved into a solid service platform for Internet services in situations where move-outs are measured in years. Although it is more difficult to maintain than DSL or fiber to the home, HFC infrastructure is an adequate service platform for most retail applications and for relatively low-density housing. This is not true for densely populated properties where turnover is frequent or where bulk services are prevalent. Modem-based bulk data services for densely populated properties are problematic, with the lack of reliability often resulting in occupancy problems for the owners.

Another challenge associated with legacy infrastructure for high-density, high-turnover property has to do with contingent liability. Many service providers and owners are discovering life safety code violations and performance limi-

The emergence of ... services like VoIP, as well as the demand for wireless Internet access (WiFi), has transformed the communications marketplace. Unfortunately, because cable was not designed as a future-proof infrastructure, it typically requires significant upgrades to support these new and demanding communications services.

tations in existing on-site low-voltage infrastructure. The added cost of resolving these problems and assuring suitable performance standards will often break the service provider’s ROI model. (For additional information on the limitations of low-voltage infrastructure, see Henry Pye’s article “Existing Communities and Infrastructures” in the May 2007 issue of *Broadband Properties*.)

The next generation of communications services will require an even more demanding environment where applications can be optimized for a converged multiuse infrastructure. This is a major “head stretch” for service providers because it will require investment in converged infrastructure and changes to their business model. Instead of being able to focus on the construction and maintenance of the infrastructure, service providers will become increasingly

dependent upon deploying new and creative services.

Bulk Service Standards

As divergent legacy infrastructure converges, the telecommunications industry is moving inexorably toward standardized solutions. Commercial real estate developers are already driving this process for MDUs by insisting upon standard, high-quality services for all of their properties. The good news is that service providers are beginning to learn that solution standards will improve operational costs and customer satisfaction.

One such solution standard is being quickly established by Korcett Holdings, Inc. (KHI) of Austin, Texas. KHI has been working with cable companies for several years to introduce Korcett-based broadband solutions for student housing. These integrated broadband solutions include a combination of hardware, software and professional services.

Korcett-based solutions are currently marketed as HiSpeedUp (www.hispeedup.com) from Time Warner Cable (TWC), RateShaper (www.rateshaper.com) from Suddenlink Communications, DemandRate (www.demandrate.com) from Cox and RateSteady (www.ratesteady.com) from Bright House Networks.

Both TWC and Suddenlink have noticed a significant reduction in operations costs and bandwidth usage where Korcett-based services are deployed. "We recently converted all of our College Station off-campus housing (roughly 9,000 end users) to Korcett-based services", says Suddenlink MDU Manager Nathan Geick. "Current estimates indicate that we are using 30 percent less bandwidth than we did for the same properties last year."

Service providers are also learning that standard infrastructure means lower capital costs for equipment, more satisfied customers, fewer truck rolls, fewer customer support issues, less difficulty in retaining internal technical expertise, and the ability to quickly add new services.

"We have nearly 40 properties in

Central Texas that utilize Korcett services, which we've branded as HiSpeedUp," notes David Roon, TWC's vice president of sales. "Monthly operational savings from reduced truck rolls and support calls range from \$2,000 to \$10,000 per apartment complex, depending on the number of residents."

To deliver cross-regional service standardization, service providers and owners must agree on a basic set of requirements, including:

Geographically agnostic availability. Service standards must be embraced by multiple service vendors. This is especially important for real estate developers with geographically diverse holdings.

Passive service deployment. Service standards must allow for services to be deployed and configured as they are ordered. Eliminating human intervention in this process is crucial to long-term customer satisfaction.

Authentication. Service standards must accurately identify and track all

The next generation of communications services will require an even more demanding environment where applications can be optimized for a converged multiuse infrastructure. This is a major "head stretch" for service providers because it will require ... changes to their business model.

tenants. This helps manage the MDU owner/operator's contingent liability for unlawful and malicious acts by tenants. Authentication also helps operators communicate with and manage tenants.

Digital Millennium Copyright

**Hear author David Daugherty
at the Summit on:**

**Beyond High Speed Internet:
Strategies to Push Voice, Video, and Other Services**

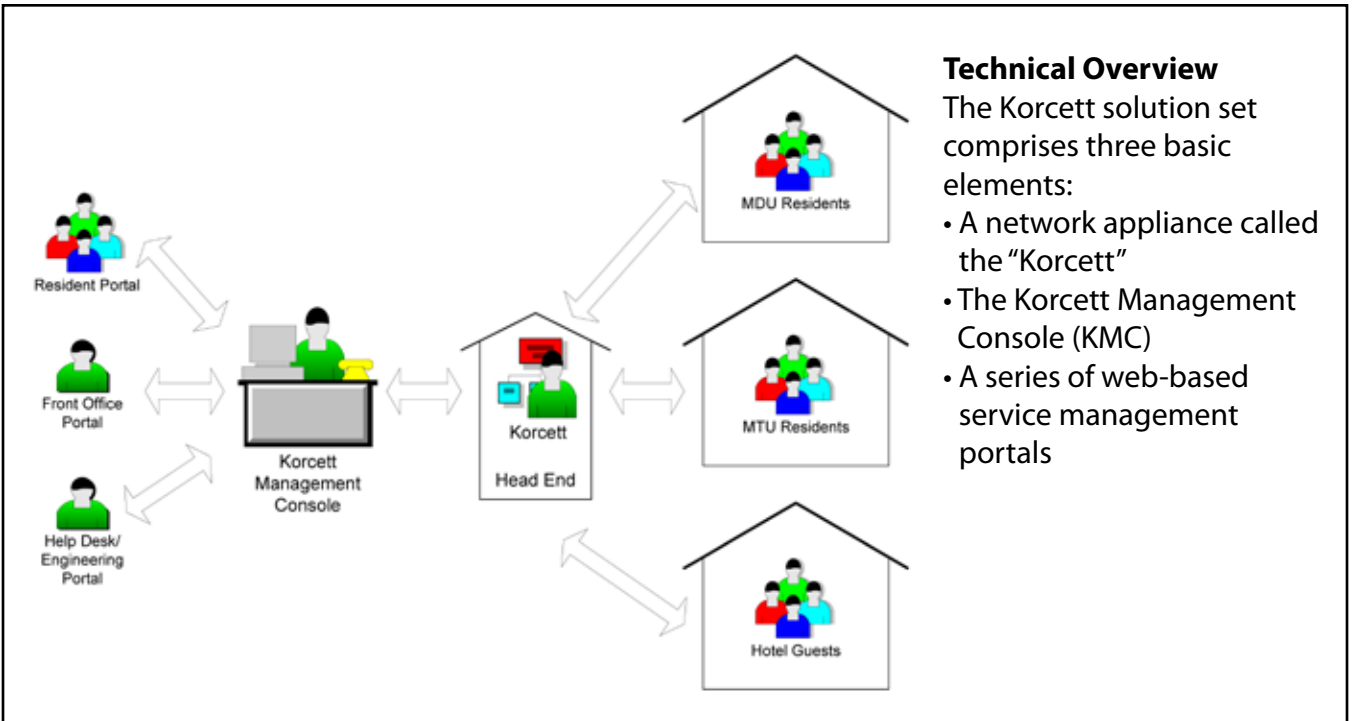
Wednesday, September 12

Session includes:

Mark Scifres of Pavlov Media,
David Cardwell of the National Multi Housing Council and
other industry leaders

Complete Program:

www.bbpmag.com



Technical Overview

The Korcett solution set comprises three basic elements:

- A network appliance called the "Korcett"
- The Korcett Management Console (KMC)
- A series of web-based service management portals

Act (DMCA). Service standards must provide the ability to help service providers and property owners manage copyright infringement.

Real-time management portals. Service standards must provide a means for tenants, service providers, property owners, property maintenance personnel and potentially others to control and manage communication services.

Service Metrics. Service standards will depend upon strong working relationships between service providers and owner/operators. These relationships will, in turn, depend upon sharing unbiased, accurate and timely information about service status.

Positive service controls. Service standards must provide owner/operators and service providers with mission-critical tenant messaging systems.

Dynamic problem identification and isolation. Service standards must be able to identify and isolate problem host devices in real time. If this process requires human intervention, tenants are certain to be unhappy.

Real-time service logging. Service standards must keep detailed records of all tenant service parameters.

Next-Generation Solutions

For the past several years service providers and owners have been working with KHI to help define and deploy next-generation solutions. In addition to TWC and Sudenlink, this group includes American Campus Communities (ACC), JPI Student Living (JPI) and, more recently, Bright House Networks and Cox Communications.

Service providers bundle Korcett managed services along with their bandwidth and market the bundle as an advanced broadband solution. The Korcett's Web-based control portals allow service providers, owners and tenants to deploy and manage all on-site communication amenities.

The operative word here is *service*. KHI provides everything required to design, deploy and support Internet services for the life of the service agreement. For owners who wish to minimize bulk

Korcett-based services allow service providers to deliver bundled services tailored to the individual tenant. These services include messaging, recording of tenant activity, turning up new services and taking automatic corrective action required to protect network integrity.

service fees and purchase their own equipment, this is an attractive alternative. According to Henry Pye, assistant

vice president of resident services and technology for JPI, "Every dollar you spend to capitalize a bulk service agreement will cost you between \$3 and \$5 over the life of the agreement."

For network equipment alone this translates into several hundred thousand dollars in savings for typical student housing properties. Having network design, management and support provided by a third-party service provider eliminates any risk that the developer will have to assume responsibility for network operations. JPI currently uses Korcett-based services provided by TWC and Suddenlink, with upcoming sites to be serviced by Bright House, Buckeye Cable and Cox.

"ACC is known for the quality of our product," says Stephen Hare, ACC's technical services director. "We pay attention to every detail of the living experience – especially Internet access. We were forced to move away from cable modem-based data services for student housing because of the related service problems. Korcett-based solutions have provided us with very stable Internet service standards, regardless of the service provider. Our students expect the very best in support and service, and the Korcett-based solution gives them the best of both worlds." ACC currently use Korcett-based services from TWC and Suddenlink, with new sites serviced by Cablevision and Buckeye Cable for the Fall 2007 semester.

Korcett-based services allow service providers to deliver bundled services tailored to the individual tenant. These services include messaging, recording of tenant activity, turning up new services and taking automatic corrective action required to protect network integrity. Service providers using this approach experience a significant reduction in support costs and improvement in quality of service.

Korcett-based services include:

- A complete set of design specifications and bill of materials for the property LAN
- Installation/retrofit of the local area network
- Access to web-based management portals

References

If you have any questions about these solutions, please contract the following references or check out "Time Warner Cable Gets Better MDU System" in the October 2005 issue of Broadband Properties Magazine.

David Roon, VP of Sales TWC Austin
(david.roon@twcable.com)

Daniel James, TWC Austin Help Desk Manager
(daniel.james@twcable.com)

Dave Schwehm, Corporate Director for TWC National Sales
(dave.schwehm@twcable.com)

Henry Pye, Assistant Vice President for JPI Resident Services and Technology (henry@henrypye.com)

Stephen Hare, Director of IT, American Campus Communities
(share@studenthousing.com)

Nathan Geick, MDU Manager, Suddenlink Communications
(nathan.geick@suddenlink.com)

- Tenant portal
- Front desk portal
- Service provider help desk portal
- Service provider marketing/sales portal (service configuration)
- Service provider accounting administration portal
- MDU management portal
- Security desk portal (DCMA management)
- Ongoing LAN equipment management and maintenance
- Ongoing Tier 1, 2 and 3 support

The Korcett, originally designed as a bandwidth shaping and management system, is the traffic cop. It watches all the traffic to and from the premises network. It is on duty 24/7 and governs traffic based on a set of traffic regulations issued and periodically updated by the Korcett Management Console (KMC). The KMC gets its service parameters from the service provider; they are typically tailored to meet the needs of a specific property.

KMC Management Portals are Internet-based management systems that al-

low authorized individuals to manage and make adjustments to communications services such as data, CATV, VOD and voice. Residents, property managers and service provider service personnel can use these portals to make real-time adjustments to any service managed by a Korcett.

Acknowledgements

Special thanks to Ian Davis of Munsch, Hardt, Kopf & Harr, Stephen Hare of American Campus Communities, Henry Pye of JPI Properties, David Roon of TWC and Nathan Geick of Sudden Link Communications for their contributions of time and expertise. **BBP**

About the Author

David Daugherty is the CEO and founder of Korcett Holdings. He can be reached at david@korcett.com. Korcett Holdings is dedicated to the development and marketing of next-generation service solutions. For more information on Korcett Holdings or Korcett Integrated Solutions, go to www.korcett.com.