Fit for the future:
addressing the increasing complexity of customer demands

François Eloy, Executive Vice President of Colt Communication Services

Times have changed for telecommunications operators, service providers and system integrators. Faced with the challenge of reducing their cost base while being able to capitalise on new business opportunities and scaling to meet new service demands quickly and effectively, many are increasingly turning to wholesale operators for far more than just additional network capacity. As a result, traditional wholesale network Access services have changed. Here, François Eloy, Executive Vice President of Colt Communication Services assesses some of the challenges in addressing the increasingly complex demands of today's end-user customers and explains how Colt is helping its operator and service provider customers overcome them.

Business customers are demanding more capacity and greater quality of service from their retail providers. As a result, operators are increasingly turning to third party service providers to go beyond simply providing circuits from point A to point B for information delivery to fully outsourcing elements of the service they deliver. Purchasing activity now often extends to include everything from a single circuit on a specific route to an end-to-end solution encompassing everything from managed services to end-customer bill production. In turn,

wholesale providers are having to meet the increased demands of their operator customers, embracing new technologies to offer ever more granular network footprints, resilient performance and increased levels of bandwidth and scalability at competitive prices.

Ensuring network reliability – the key foundation for end-user satisfaction

Architectural evolutions in core telecommunication technologies mean that legacy systems have largely given way to next-generation networking technologies such as Ethernet. Indeed, Ethernet has now become an industry standard for delivering reliable enterprise networks thanks to its ability to offer high levels of throughput and availability with low levels of latency and jitter. It has become so ubiquitous that the network capacity and connectivity it offers are now largely taken as a given by the majority of end-users. This is why, at the most fundamental level, service providers must ensure the highest levels of network performance to deliver services that their end-customers can rely on.

As such, it is important for operators and service providers to work with a wholesale partner who can provide a robust, reliable Carrier Ethernet experience with end-to-end network visibility and guaranteed service level agreements (SLAs) that they can rely on. This in turn allows operators

to offer their own guarantees to customers, ensuring high levels of service and availability at all times. For the end-customer, having a single point of contact that manages all third parties offers real value, providing reliable service assurance for all solutions implemented and significant economies of scale.

However, as end-customers increasingly demand the highest levels of network performance as standard, the point of differentiation for service providers is in their ability to offer the variety of options their end-customers require, delivering a range of value-added customised solution offerings that extend their current service portfolio and generate new revenue streams at a lower cost base. This makes the underlying network no less important – in fact, as the delivery mechanism for accessing a new range of innovative technologies and services, the reliability and performance of the network becomes even more critical as the market for IT and communications technologies continues to evolve.

Managing the data explosion: on-demand bandwidth

One development that is having a major impact on the provision of today's networks is the exponential increase in data produced, managed and stored by businesses.A recent IDC study revealed that the world's information is doubling every two

years. In 2011 the world will create a staggering 1.8 zettabytes, and by 2020 the world will generate 50 times that amount of information. This data revolution is affecting every operator, service provider and almost every type and size of end-user organisation. Whether one focuses on cloud computing, outsourced data or the adoption of mobile internet and other technologies, it all comes down to one basic fact: people are sharing more data than ever before and demand the ability to access it whenever, wherever and however they choose.

For network operators, the data explosion is creating a host of new challenges including data management, storage, processing, safety and security as well as the provision of Access technologies which are key to data delivery and as such, to unlocking the valuable insight this data can provide. This, in turn, places more importance on infrastructure and backbone operations.

Network capacity and connectivity are among the most important elements here because they enable operators to cope with and satisfy their end-customers' insatiable demand for data. However, with cost efficiency a major priority for service providers, many have limited resources to provide their own network infrastructure with the necessary scalability to cope with peaks in demand from high levels of data use.

Colt provides the backbone operations that others do not own and has invested very heavily in its network capacity and connectivity across Europe. It provides the ability to scale up easily whenever necessary, with international networks that go across some 39 major European cities and 21 countries in Europe. As such, Colt's operator partners can run their services over Colt's network and offer more valuable services, knowing that the capacity, speed, resilience and bandwidth they need to cope with peak demands is in place and can be scaled up and down as necessary to ensure only the capacity that is needed is paid for, keeping costs to a minimum.

Indeed, there are huge opportunities associated with being able to scale up services quickly for customers. As the cloud model of computing grows in popularity, there is a need to provide basic cloud 'building blocks', essentially enabling customers to pick and mix the services that they need as and when they need them, something which service providers are seeing increasing demand for from their end-user customers. This in turn, means that operators must be ready to quickly scale-up capacity as and when new cloud services are demanded. Many cloud services have initially been developed for and driven by the needs of specific enterprise customers but now the time has come to make such services available on a repeatable volume basis through wholesale providers. Operators that are not going to build their own cloud infrastructure and portfolio will decide to resell services provided by wholesale suppliers like Colt.

And as more businesses move to start working in the cloud or virtual environments, such as IP Virtual Private Networks (IP VPN), it is not just the pure bandwidth available for pulling content from the internet or the cloud which is important. Access itself becomes business-critical along with additional options such as resiliency, predictable performance and upload speed to push data back to virtual servers. As such, operators need a network they can rely on for delivering business critical cloud and virtual solutions and as a result, bringing together IT and network connectivity has become increasingly important to ensuring the delivery of a predictable quality of service.

Automation and service differentiation

In addition to the need for a robust, scalable underlying network is the need for automated and flexible management for ordering goods and services. Automation helps service providers not only to save costs but also enables easier upselling of new services to end-customers by removing the need for the

wholesale provider to be involved in the sales process. No longer is it necessary to experience costly delays while waiting for the wholesaler to come back with answers to specific queries as operators can now find out the information required to sell new services to their end-customers themselves. Automated services can include the process for determining how a customer's building can be connected to the network or what the pricing might be for a particular product or service, while ensuring that this information is integrated directly into operators' own workflows.
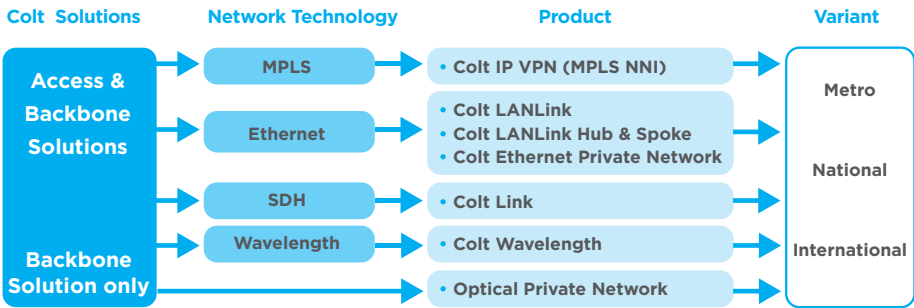
Colt provides a wide range of services for its partners, from basic access to an end customer's site to a full range of end-to-end services, with three separate options on offer for obtaining the required pre-sales information: data provided for use in the operator's own internal pre-sales systems, data accessible via online tools, and thirdly the human interface, particularly for more complex enquiries.

Indeed, one of the main points of differentiation for wholesale providers is their ability to offer the variety of options that different operators, service providers and system integrators need. A one-size-fits-all approach just doesn't work as customers here have such different business needs. One operator may want all its supplier information downstreamed to its own pre-sales tools, while another might want to use the wholesale provider's online tools and a third may require personal support if it has particularly complex needs, often making use of two or all three types of interface operating in parallel to deliver the tailored services their end-customers demand.

Large enterprises and ever larger numbers of SMBs are becoming increasingly demanding in how they want services delivered and tailored to their specific needs. For operators and service providers, this generates an opportunity to add real value onto commodity services and respond to demands for quality of service and experience in a positive way by customising their approach to suit the customer. Automated service provisioning helps service providers to respond much more quickly to these demands and deliver seamlessly tailored services to end-customers. And as we all know, if customers are serviced well then operators will be rewarded by their loyalty. For cloud services, this loyalty could translate into very valuable ongoing revenue streams.

One solution, a full range of options
Colt Access & Backbone Solutions: based on a wide product portfolio

Colt Solutions	Network Technology	Product	Variant
Access & Backbone Solutions	MPLS	• Colt IP VPN (MPLS NNI)	Metro
	Ethernet	• Colt LANLink • Colt LANLink Hub & Spoke • Colt Ethernet Private Network	
	SDH	• Colt Link	National
Backbone Solution only	Wavelength	• Colt Wavelength	International
		• Optical Private Network	

Freeing service providers to concentrate on their customers

At the heart of the changing market dynamics in the telco industry is the changing nature of end-customer demands and there are a number of distinct operator market segments to be addressed. At the larger end of the scale, global or major multinational operators are looking for support for creating services for their end customers. These large operators win multinational deals from their enterprise customers and often have requirements to bolster their portfolio to address the business they win.
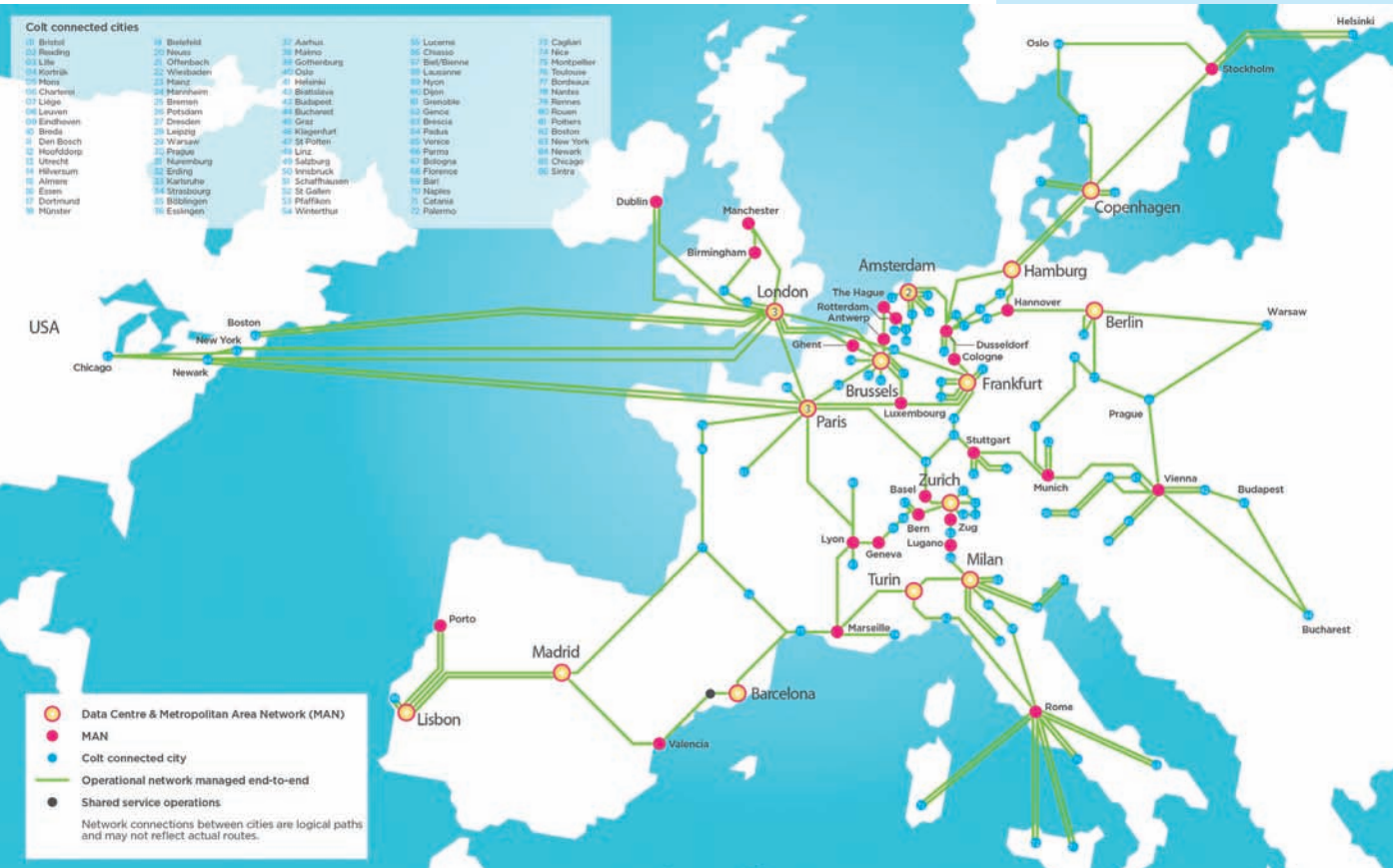
Some international and regional service providers may have different motivations when looking for additional or alternative partners, whether they be looking to consolidate the number of wholesale partners they work with for ease of management and to maximise their purchasing power with a smaller portfolio of providers or wanting to establish new services in new countries and regions. National operators again are likely to have a different agenda, possibly as incumbents looking to expand their services abroad or looking to increase their home network coverage and capacity. Similarly, smaller regional or city-based service providers may want to replicate to another city or part of the country in which they operate.

Regardless of their requirements, the type of wholesale partner that operators and service providers are seeking is one with a widespread network that will accommodate rapid scaling or expansion if required, with a growing amount looking to entirely outsource not only their network services but also value added services such as cloud and managed services. This frees service providers to concentrate on what they do best: providing excellent customer service and growing business operations rather than managing network infrastructure day to day, enabling them to offer more value-added solutions safe in the knowledge that the capacity, speed, resilience and bandwidth they need is in place.

A wholesale supplier such as Colt that is able to act as a single supplier for fulfilling all or a range of these customer needs using a unified approach for full European coverage or just a single limited geography offers some distinct advantages in this market. Colt has the volumes that allow it to develop the required customer interfaces, processes and tools to support the delivery of a varied service and solution offering that can be tailored to an individual customer's business needs.

Conclusion

Over the past decade, the industry has been shaken up and transformed by rapid deregulation, breakneck technical innovation and profound shifts in the way that consumer and business customers use IT. Colt has responded to the changing needs of its operator and service provider customers driven largely by the changing demands of end-users, the changing nature of the wholesale technology portfolio and exciting new opportunities afforded by cloud computing. By seeking to provide end-to-end solutions for its operator partners that encompass not only the individual 'technical' service but the entire end-to-end service provision and underlying network, Colt provides a full information delivery platform. This enables its service provider customers to hand over a larger portion of their business to a wholesale partner they can trust and as a result, to concentrate on their core business themselves to provide the highest levels of customer service and ensure they meet the increasingly complex demands of today's end-user customers.

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