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NEXUS:

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EDITOR'S LETTER

The need to establish reliable, secure and efficient network interconnections is vital to the performance and competence of the network and the company that owns the network assets. Housing your network in the correct facilities can significantly improve provisioning times and allow revenue to be taken faster, with greater transparency of network assets and thus greater efficiency for the company.

When selecting the appropriate connection facility there are a number of criteria that need to be scrutinised and some key questions that need to be answered:

- What sort of interconnection facilities should you be looking for?
- How can you ensure accurate information when selecting a facility?
- How can you have the foreknowledge of accessibility to customers and associated costs?
- How can you differentiate between policy and pricing in interconnection facilities?
- How can you ensure the least amount of time from installation to revenue generation at the lowest one-time and recurring costs possible?

- How can you ensure accurate inventory management and establish predictable provisioning times?

- How can you avoid delays when being installed?

- How can you ensure that carriers are really in the facility?

You'll find the answers to these questions and more over the next few pages in a series of useful articles authored by Hunter Newby, executive vice president of strategic planning with NYC based telX.

The series (under the section "NEXUS") was originally published in Capacity magazine vol. 2 issues 4 – 7, May to Oct 2002. The articles take you through step-by-step business practices and procedures. They examine, for example, what you need to arm yourself with when negotiating meet-me room contracts, how to look for the appropriate type of meet-me room to how to accurately manage your inventory, as well as a top 10 interconnection rules to observe.

RACHEL JONES

EDITORIAL DIRECTOR
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ABOUT TELX

telX Group, Inc operates the original and largest carrier-neutral interconnection facility at 60 Hudson Street in New York City, serving many of the world's largest carriers and large bandwidth consuming enterprise customers. telX customers benefit from the ability to directly access dozens of networks in the most cost-effective and time-efficient manner. The telX team comprises some of the most knowledgeable and experienced people in the industry. We are dedicated to ensuring that our customers achieve their interconnection goals and objectives. telX delivers unique, industry leading products and services, all of which are designed and priced with a single purpose - the successful execution of our customers' communications objectives.

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Now the bubble has burst...

HUNTER NEWBY OF TEL^X LOOKS AT THE INFORMATION CARRIERS SHOULD ARM THEMSELVES WITH WHEN NEGOTIATING MEET-ME ROOM CONTRACTS.

NEXUS

Over the last several years carriers and their network construction budgets have been driven by a focus on top-line revenue growth. This massive spending created speculative telecom businesses that planned to live off of the ever-growing bubble. Now that the bubble has burst those businesses are in a sticky situation. It is now do or die time for many of these organisations as they look for revenue-generating businesses.

Take the co-location, or meet-me-room operator business model. These companies are in the business of interconnecting carrier networks together, and should not to be confused with web-hosting type co-location. How does an interconnection facility attract customers and generate revenue?

There are three components that generally apply: facility location and attributes; existing carriers installed; price and contract. These three elements, in that order, are generally how the carriers looking for space go about finding it.

The first and second components have become interlocked as good facilities have attracted more carriers which in turn made it a better location overall. The third gets negotiated. The Achilles heel in this process is the second component – existing carriers installed. What is tangible in this process is a building address, certain specifics about the facility such as HVAC, pricing and contract. What is not so tangible is verifying what carriers are actually “there” and what they may, or may not have to actually deliver service.

We’ve all heard the lines from co-location operators. The certain assurance “oh yes, that carrier is coming in”, or “they’re building out to us”. The confident, “they just signed with us”. Or, my personal favourite, “they have fibre in the street”, as if to imply that it is close by and will be easy to connect to. It is very important when

evaluating a business case to build into a co-location facility to really learn what carriers are truly “there”.

So many co-location facility operators have no real idea which carriers are “there” and to what extent those carriers have capacity available to interconnect to other carriers. And this is still only half the problem. These operators also have no idea what it costs carriers to build out to a facility, or how long it can take. Such oversights are critical, as availability and choice of carrier connectivity is the foundation of a successful facility.

From the beginning of the selection process of a co-location or meet-me room facility, the prospective carrier tenant allocates a great deal of resources to making the right decision. This decision is based largely in part on information given to the carrier by the facility operator about other carriers already in the facility. If that information is inaccurate in any way, then problems may arise once the incoming carrier installs and looks to connect to other carriers that are supposedly “there”.

Delays cost money. After a prospective client has done its diligence and made a decision, the push to get signed, installed and connected begins. Getting connected is how carriers generate revenue. Every carrier seeks the least amount of time from installation to revenue generation and at the lowest one-time and recurring costs possible. Time is of the essence, and money is tight today.

In order to avoid the pitfalls of inaccurate carrier network representation there are a few key terms that all prospective co-locators should be aware of.

Let’s first examine the “coming in” carriers. Whenever a co-location facility operator tells you that a carrier is “coming in” you must be wary. If you need to connect to this carrier in the

foreseeable future ask for more details. This usually means that someone who works the facility operator has had a conversation with the prospective carrier and that carrier has expressed an interest in coming in to the facility at some time in the future. Every possible issue can arise between now and the day they are “actually” in, not the least of which is contract negotiation and payment.

Next is the list of “signed” carriers. This too should cause your ears to prick up a bit. First define what “signed” means. Did the carrier sign a simple memorandum of understanding (MOU) that states that if and when there is a valid reason and sound business case to build in to a facility they will then sign a real contract, or did they sign a real contract that commits them to paying real money? Real contracts that are signed with committed revenue are better than MOUs, but there can still be delays.

Once a carrier “signs” a real contract there are several factors to consider such as construction of conduits, in some cases including foundation, or core drilling, fibre pulling and splicing and other time-consuming issues. All of which further delays the actual deployment of real telecom services. The time frame for installation can vary from several weeks to several months just on the layer one infrastructure, and does not include the deployment, test and turn-up of equipment necessary for lit service.

Then there is the general statement, “they have a network presence here”. What kind of network presence? Once the real contract is signed and the physical installation is complete there are different degrees of actual network deployment. More and more carriers are building a minimal passive fibre presence and then growing to add equipment based on

demand for lit service. As technology enables carriers to interconnect by dark fibre, the need for equipment, as in the Sonet multiplexer, becomes less of a necessity.

This is not to say though that the need to deliver electrical circuits is completely gone. Far from it actually, but dark fibre in a fibre distribution panel is a long way from equipment deployed, installed and ready to go. For the carrier who is “there,” the difference is tens of thousands of dollars in capital expenditure and a signed order with enough revenue to justify those dollars to deploy the equipment. If you need to interconnect at the electrical level then you better find out beforehand if the equipment necessary is actually “there” and if it has any available capacity.

Finally, “they have fibre in the street”. This is reminiscent of the story about the carrier who bought an old meat packing plant along the railroad tracks where they knew their fibre was built. It was the perfect building, unlimited floor load, lots of power, roof access and the fibre right out back. After buying the building for several million dollars and then pumping another several million in to it the carrier’s real estate people handed it over to the network people to pull in the fibre and light the building. Well, the network people said, “yes, that is our fibre, but the regeneration point is seven miles away and because of the way the network is built it would be impossible to splice the fibre at this point.” So, they had to buy an RBOC local loop from the regeneration point back to the building to get access to their own network. This story really brings the problems in to focus, since it was the carrier’s own fibre that it lacked accurate information about. Just

imagine that it is not your fibre. How much would you know about it then? Ask about the network first and save yourself a lot of time and money.

The co-location and meet-me room operators who came late to the party have missed out on three critical components of the business because of their lack of experience.

Firstly carriers want to be where carriers already are. This makes the most sense from a high-level view of time and cost savings. Even if the “perfect” building is built across the street if there are no carriers in it there is not going to be much interest.

Secondly, even if a carrier wants to be in your facility, has an order for service driving the deal and has the capital approved for the build out it can still take a long time to complete. So long that every ancillary interconnect deal that was waiting for that build is now dead, or has moved on to a facility that could actually do it. Making promises that carrier XYZ is “coming in” can really cause problems.

Thirdly, even if a carrier has an order to deliver service to someone within your facility that does not mean that they are going to build. Many times the revenue from the circuit is not enough to justify the cost of the build, especially in today’s falling bandwidth price market. Carriers will turn away business that does not make financial sense for them.

The moral of the story is “don’t count your carriers before they are there”. If you are a co-location, or meet-me room operator that represented to incoming clients that certain carriers were “there” and it turned out that they were not then you have some explaining to do.

On the button

HUNTER NEWBY OF TEL^x LOOKS AT WHY YOU SHOULD MANAGE YOUR INVENTORY ACCURATELY.

NEXUS

Network inventory management comes in many different shapes and sizes. It is of high importance, if not critical, to both the buying and selling carrier, yet many carriers continue to update inaccurate records, and even have no tracking method at all for some types of capacity.

While this is not a sound business practice for any enterprise, in the current telecom market in particular, accurate inventory management cannot be ignored.

Unfortunately, for many carriers, accurate identification of inventory is a monumental task. Even before a carrier begins the process, it must first understand where it needs to start and why accurate records are essential.

In failing properly to manage network inventory carriers run the risks of creating customer issues as well as internal issues such as accounting errors, budget overruns, low employee morale and the need for more customer service representatives. Unless the carrier can see from an executive management level down how the business is adversely affected and how less than optimal results will never be remedied until a serious, dedicated effort to manage inventory accurately is put in place, then the entire process may never happen.

The biggest motivating factor to get bandwidth inventory management in order is lost revenue. There are others, for example: missed opportunities due to being built out but not knowing it; a tarnished reputation for both the carrier and salesperson; lost credibility; additional cost and time in using alternative methods

of interconnecting; not finding better ways to distribute bandwidth due to a general lack of network knowledge.

The normal sales process in telecom land is sell first and figure out how to provision later. Of course most sales orders that were signed were counted as revenue before they were installed and billed, but we can all see where that practice has taken the industry. Now it is all about the revenue and profit.

GOOD AND BAD REVENUE

There are two main issues with revenue – there is good revenue and bad revenue. Good revenue is profitable, bad revenue is generated from a service that costs more to deliver than can be billed out for it. Carriers that lack sound inventory records can fall in to the trap of selling a service at a price that has been calculated using static information.

For instance, when access facilities such as transport or dark fibre have been exhausted the next order in to that location will be delayed. The delay itself is lost revenue. When the carrier gets organised it might realise that the cost of new build in to that location cannot be financially justified based upon the revenue from the order. In that case it may avoid “bad” revenue, but risk tarnishing its reputation by telling the customer it cannot deliver the service after it has been sold. If the new build is done without financial analysis just to complete the order then it might have created a bad revenue situation. In either case, time has been lost due to poor inventory management and that costs money and credibility.

With the current costs of building out telecom

networks, it is not difficult to see how there could be accounting and budgeting problems. But aside from this and customer frustration, it's important to consider the salesperson's attitude.

Many people say that selling is the hard part. But as hard as it is, the installation process can be even more difficult due to inadequate inventory management. If the sales group is compensated based on service usage then they will be placed in an awkward position – being told to sell more, but not having been paid for what has already been sold. Add to that the customer inquiries about service installation dates, which eventually become complaints, and the sales position becomes even more precarious. If the carrier decides not to deliver the service and/or the customer cancels the order, then what has the salesperson been doing? Needless to say morale would be justifiably low.

THE STARTING POINT

So where does a carrier start? At the lowest possible point. First it should separate out lit networks from dark networks. Next, separate out the network by types of service (LD voice, IP, transport) and then customer segment (carrier, enterprise, consumer) if applicable. Within each segment go to the lowest common denominator in terms of the network, layer 0 to layer 1. The physical layer of the network needs to be understood before anything else. Just like a building, without a good foundation everything above it is not safe.

Metropolitan access, long haul and regional dark fibre networks are different, but all have

the same common principles. There are conduits of varying size that go from A to B. Within them there are fibre cables (usually single mode) of a particular count (48, 72, 96, etc). Go to the PoPs and switch sites and do an inventory. Gather as much detail as possible on the type of fibre, connectors, fibre panels, suite numbers, addresses. All of this information should be compared with what currently exists and then eventually keyed in to a database.

Lit services (voice, IP, transport) each have their own special circumstances. Once inventory efforts reach the equipment level a real understanding a capabilities becomes necessary. As opposed to fibre, which is either on or off, equipment at the base level can either operate properly or not. It can be totally populated with cards and ports or not. Carriers should be aware of the box that has nothing in it. It looks good in the rack, but don't count on it to work when you need it to. Ordering the right cards takes time and money.

Of particular interest are the networks garnered through acquisition or merger. If proper integration did not happen at the time of the merger then the people with the knowledge are probably not around any more.

MAKE COMPARISONS

Once every piece of equipment is in its proper service and customer segment silo, and all the boxes, cards and ports have been counted, this data too should be compared with what currently exists in the database. The database selection process is a difficult

task as well and should be started when the inventory process begins. The vendor's input can be very helpful in gaining insight to the process and determining whether the vendor is capable of supporting the carrier's future needs.

Finally, a few words about the database software. Many believe that software programs can save the day and magically eliminate hours of physical research. This is only partially true if there is a software-based inventory management system already in place. In this case an upgrade and then an update of existing information is necessary. This may take less time to complete, but does not take away the fact that this is a manual job.

Since it is manual there is the possibility for errors. In order to avoid bad data making it into the new database a simple bar code and scanning system could be used. Once a conduit, cable, rack, or piece of equipment is in inventory it can be labelled and scanned. This can help to eliminate duplication and show up omissions. As employees turn over new staff can simply scan the bar code to see what is inside and then make any necessary changes as they see it. This type of system also makes it easier for the data to be compiled and transferred to the database for updates.

In summary, accurate network inventory management is a key component to establishing predictable provisioning times, controlling costs and ultimately operating a successful communications business.

Pick the right package

HUNTER NEWBY ASKS WHAT SORT OF MEET-ME ROOMS CARRIERS SHOULD LOOK FOR.

NEXUS

Carriers need to interconnect. What is the good of a network that has no ability to connect to you, or for you to connect to it? This need to connect is the fundamental principle that enables interconnection facilities, or meet-me rooms to exist. But network operators should beware, what at first looks like the best, or only place to be, can end up looking like the last place you would ever want to be.

In today's carrier-level internetworking world foreknowledge of accessibility to customers and the associated costs is crucial. The value of an interconnect facility in a carrier hotel is very heavily weighted by four main components: carriers with an actual network presence there today; the interconnection policy, whether it is a neutral facility; options for getting connected to carriers not currently there; costs associated with the different types of intra-facility, inter-building connections. A facility and building that has several carriers and gives its tenants the ability to connect to each other in the most sensible and economical way is of the highest importance.

Most interconnection facilities look the same. What is different is the policy and pricing that wrap the package.

There is a large difference between the monthly cost for leasing a cabinet and the ability to connect other carriers. In some facilities the low monthly lease cost on the space is appealing, but why is it so low? An empty facility defeats the purpose of carrier co-location. Sometimes it is worth paying more for a cabinet in a facility that has the carriers you need to connect to in the same facility.

What about the different policies that govern interconnect facilities? Imagine you are investigating a new tier one market. The big carrier hotels and interconnect facilities within them have been established by now. You need somewhere to locate your equipment and have low cost, high quality, time efficient access to carriers. You want to be where you get the most for your money.

You begin doing site tours in your new tier one target market and see some empty facilities and some populated with a healthy mix. The cabinet rental costs vary.

Some buildings have facilities within them that are deemed to be the place where all interconnections happen. A thorough inspection of this facility will give you the information necessary to assess whether or not it contains the carriers you need, regardless of

any building designation. Beware the “because we said so” and “your choice is only us” providers. The “build it and they will come” days are over. Now it is “show me”.

There is always the potential for conflict of interest. Your best interests as a tenant are not always what your landlord has in mind. In this relatively new, loosely defined, standardised policy-lacking industry there are many ways to conduct an interconnect operation. On the surface the story may sound good, but eventually the tune your landlord sings may not be what you want to hear.

The most common example of a less than optimal interconnect facility is a carrier’s own co-location space. Carriers originally built co-location facilities to assist the sale of their own network services. In many instances the buyer needs a place to put its equipment. In an attempt to control the installation process the carrier built the colocation, or data centre space to meet this need. This is a nice fit for the buyer if it only needs to connect to one carrier – the landlord. But you’re stuck if you want an alternate provider, or a direct interconnect to another carrier tenant in the facility. The carrier’s business is not to sell colocation space, or provide open interconnection to its competitors, it is to sell its own network services.

Another example of landlord policy affecting your business are interconnect facilities earning sales commissions from carrier tenants. A service provider looking for a home wants the most for its money. A great place to get new business is the facility where its network is located.

If the facility operator is acting as an agent for one or more of the service providers offering the same service you offer there may not be much revenue for a new entrant. The operator will try to protect its commission revenue stream and not promote a carrier not paying a commission.

While you are on your journey you might end up asking yourself a question. Why not go to a neutral facility that treats everyone fairly and equally and lets tenants buy and sell between each other directly based on their own costs and quality? In today’s market service providers need all the help they can get.

For more reading on meet-me rooms please visit Telcap’s searchable archive where you can locate articles from *Capacity’s* back catalogue at www.telcap.co.uk

The 10 Commandments

HUNTER NEWBY SETS OUT HIS TOP 10 RULES FOR INTERCONNECTING.

In the past five years in the interconnect business at 60 Hudson Street I have seen many things. Some made sense straight away and others took a bit of pondering. Here, in no particular order, are my top 10 proverbial phrases that I think describe today's interconnect business.

THE FIBRE IS IN THE STREET

In other words, it's on its way, but when it gets there no one knows. Don't bet the farm on a carrier delivering on what they promise when it comes to an install time. The root of the problem lies in the fact that they do not know what they have or where most of the time. This lack of inventory creates delays. Penalties for missing dates are a good way to safeguard against this, but sometimes they take longer to work through legal teams than for the circuit to be delivered. Who forecasts revenue from penalties anyway? What you really need is the circuit. Sell first and provision second is a bad sequence for the buyer.

A CAGE IN A CARRIER-OWNED FACILITY CAN BE LIKE A CELL IN A TELECOM PRISON

What first looks like a great rate can get ridiculous when the cost to deliver the loop or cross-connect is factored in. The real-life example here was a European transatlantic carrier selling a London-New York STM1 for \$3,500 a month. The New York end was 60 Hudson. That was where the buyer was as well. The seller was in a CLEC colo and was barred from having any access to alternative and more cost-effective means of in-building

transport. It was told it had to use its landlord's CLEC local transport network to deliver the circuit four floors away. The cost for that OC3 zero-mile loop was \$3,700 a month.

A TELECOM BARGAIN IS SPACE YOU DON'T NEED AT A PRICE YOU CAN'T RESIST

This is the \$400 rack in the empty facility. Great price, but what you really need is other carriers to connect to. In the carrier world co-location is secondary to interconnections. What is the point of a colo facility if you still need to buy local loops to get to the carriers you want? First find where the carriers you need to connect to are and then negotiate for the space there. It is worth paying more for the rack and saving on the time and cost of the interconnect.

ALL THAT GLISTERS IS NOT GOLD

So they spent \$600 per foot building the place out and they have the best coffee bar and game room in the city, but when you get down to it this is still a carrier-owned and operated facility and cross-connects cost \$500 a month. Don't blow your budget and give up your freedom for a latte.

WHEN YOU HEAR SOMETHING THAT DOESN'T SOUND RIGHT, SPEAK UP

What's the difference between an OC48 and a 2.5G wave? They're both OC48s, right? No, not really. What happens when an Ethernet IP provider in your facility sells a 10Mbps circuit with a Cat 5 interconnect requirement, but you know the buyer only has a single mode fibre patch panel and no one catches it? What do

you do when the sales rep for the IXC with only a fibre panel in your suite sells one of your tenants an electrical circuit, but you know they have no multiplexing equipment? You speak up. Be the bearer of bad news and tell everyone involved that they are heading for a critical failure. Offer suggestions on how to solve the problem. Usually solutions take time and cost money. No one wants to hear it, but in the end everyone will respect you for your insight and honesty.

IF IT DOESN'T MAKE SENSE, DON'T DO IT

You need to build the business case to justify your fees to your customer. If your proposition does not create greater operational efficiency, or generate enough positive revenue to cover the fees then help them find another way. At the very least you build a good name. Nothing is more annoying than people who know when something doesn't make sense, but still push to "get a deal done".

WHAT COMMUNICATIONS LACKS IS COMMUNICATION

This applies to many business levels. The real problem is that informed people with good follow-up and notification skills that can manage an intelligent conversation are not as plentiful in telecom as they are in a pub during a football game. Sometimes reporting that there is no information is good. It is bad information that causes unnecessary delay. The only thing worse than bad information being communicated is an intentional lack of communication. Always be upfront with

everyone. If there is something that can't be done tell the customer right away. No one wants a surprise that they could have been told about ahead of time.

A CLOSED MIND IS A GOOD THING TO LOSE

Being creative is essential in this business. There are usually three or four ways something can get connected. Pick the best one for all parties involved. Always keep safety codes and telecom standards at the top of the list. If you charge a reasonable fee for a service someone else can benefit from then you have a good model that will grow. Creative thinking and flexible pricing produce solutions that carriers buy.

HISTORY REPEATS ITSELF

Learn from as many failures as you can find. At one time AT&T had a chance to completely own the co-location and meet-me room business model in the US, but did not know it. Instead in 1984, when the break-up of AT&T was mandated, it decided to not mention that it would not allow competitors to co-locate

equipment in its buildings until after the agreement was signed. This meant it lost the opportunity to have all of the competitors become tenants and thus control all of the interconnections, power, comings and goings, and so on. Instead competitors were forced into a then almost-vacant 60 Hudson Street. The same happened again in the late 1990s when RBOCs would not allow CLECs in to their central offices.

YOU DON'T HAVE TO CLEAN SOMETHING THAT DOESN'T GET DIRTY

Carriers want to be where carriers already are. Proximity implies time and cost savings. A mint facility the size of a football field in the middle of downtown nowhere will probably never lose its original floor shine. When I see boxes, wire clippings, fibre slack and other bits left behind I don't see a dirty mess. I see progress. I enjoy watching the brimming trash bins get carted away everyday. It reminds me that telecom is alive and well in some places. You just have to know where to look.

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