



## **CASE STUDY: CHICAGO INTERNATIONAL PRODUCE MARKET**

### **History**

In 2001, after years of speculation and two years of planning, 19 wholesale produce companies broke ground on a state-of-the-art, \$50 million dollar multi-tenant building on Chicago's west side in the Pilsen neighborhood. Developed by CenterPoint and built by FCL Builders, The Chicago International Produce Market (CIPM) is a nearly half million square foot facility that combines office space, coolers and warehouse areas. The building is 1500 feet long and approximately 300 feet wide. Each tenant occupies a piece of the building running lengthwise; some vendors have more space than the others. The space is divided into units of about 40 feet by the 300 feet dimension. The smaller vendors have 1 unit as their space; the largest vendor has 5 units.

### **Driving Factors**

IPiphany was responsible for the 19 tenants of the building banding together to form a buying cooperative for their technology needs. There were several reasons for this.

#### **Price**

By buying as 19 vendors, the CIPM tenants were able to realize significant cost savings. Simply put, pricing for 500 ports vs. 50 ports is dramatically less on a per port basis. Also, because of the current depressed environment for technology purchases, the large capex deals had high visibility resulting in a very competitive bid situation. The price savings also carried over into recurring costs such as local telephone service where aggregating usage resulted in heavier discounts.

#### **Scope of Technology**

By leveraging their collective buying power, the owners of the CIPM were able to get a higher level of technology from a features and redundancy standpoint than they would be able to afford as stand alone purchasers

#### **Ease of Installation**

Because of the accelerated time frame of the build out and the owner's need to focus on their businesses, a common technology infrastructure is easier and faster to implement than individual infrastructures. Also, because the spaces are similar, it is quicker and easier for one firm to do the job and retain accountability throughout.



### **Ease of Management**

Again, the single technology infrastructure is more easily managed than 19 separate infrastructures.

### **Value Add to Space**

The common technology infrastructure has become a component of the CIPM as a whole and individual unit's infrastructure, meaning it has increased the worth of the owner's investment in the building.

## **Solution Components**

IPiphany's strategy for the CIPM was to form a pseudo-BLEC arrangement where any shared infrastructure is rolled into a monthly fee. This fee includes a lease for all equipment and charges associated with installation, monthly service for local, long distance and internet services, and ongoing support of all common infrastructure. Additionally, each tenant has a separate monthly charge that covers their individual equipment and service needs.

IPiphany broke the solution into different stages:

- Common riser system for delivering telephone and data services
- PBX and local service
- Internet Connectivity
- Structured Cabling and Video Security

## **Riser System**

IPiphany was originally retained by the CIPM members to help implement a common riser system. Through a series of events, no provision had been made to deliver telephone service beyond the local carrier's (Ameritech-SBC) demarc (demarcation point) at the north side of the building. Several proposed and rejected ideas included a trough through the middle of the building and a riser through the loading dock.

After the shell and core of the building were completed, it became apparent that extending the demarc to individual tenant suites was going to be a huge problem if it was not addressed immediately. At first, the tenants believed that they could simply each contract for their own demarc extensions. However, this didn't make sense for three reasons:

- More costly, especially for vendors at end of building opposite the demarc.



- Multiple cabling running through tenants' spaces with no condo association provisions for doing so.
- No provision for sharing services such as common PRIs, phone system, etc.

IPhany's solution was to design a common riser system that addressed all three of the above issues while providing service to all tenant spaces. IPhany interviewed each tenant to determine their individual needs. Most tenants expressed similar needs; a minimal number of POTS (Plain old telephone service) lines and a need for internet connections. However, since the riser needs to accommodate future as well as present needs, we suggested a more sophisticated solution that delivers copper and fiber to each tenant suite through an MDF (main distribution frame) and IDF (intermediate distribution frame) backbone design.

The CIPM Building Riser Diagram details the backbone. There are 200 pair of copper running to the MDF and each IDF. There is also 48 strand of multimode fiber to each IDF and the MDF, and 48 strand of multimode fiber between each IDF and the MDF. Each TC (telecommunications closet) has 25-50 pair of copper and 6-12 strand of multimode fiber running to it from the closest IDF.

The copper lines give each tenant the ability to support POTS, PRI or T1 lines for a standalone phone system. The copper also allows the CIPM to locate a shared switch at the MDF and/or IDF and use the copper connections for station handsets off of the switch. The fiber allows for tying together remote nodes for a shared phone system and for shared internet access.

The riser design has these advantages:

### ***Price***

By sharing a riser system, the CIPM tenants reduced their costs for extending the individual demarcs by an average of \$ 8,000. Furthermore, using a distributed IDF/MDF scheme saved each tenant an additional \$ 2,000.

### ***Technology***

The shared riser gives each tenant access to a fiber backbone which would have been significantly higher on an individual tenant basis.

### ***Flexibility***

The riser system can support a standalone phone system for each tenant, a centralized shared system or a combination of both. At the time the tenants were deciding to implement a common riser, they were unsure whether they would be pursuing a shared PBX. Therefore, IPhany designed the riser to support all scenarios.



### ***Future Application Support***

Although the needs of the CIPM tenants are basic at the present time, the presence of fiber will allow for future applications.

### ***Data Connectivity between Tenants***

The great distance of the building places limitations on data transfer between tenants. The fiber backbone in place will support video security cameras, shared internet access and allow tenants to connect data systems to each other. This has already proved beneficial to one tenant who bought another tenant's business that is not located next door, but rather over 400 feet away. They will be able to tap into each other's systems via the fiber backbone.

IPiphany worked closely with the CIPM tenants, CenterPoint and FCL to verify that the design met the needs of the tenants and was congruent with the building design. After approval by all parties, IPiphany wrote an RFP, held walk-throughs and invited 10 different companies to bid the job. After thorough review, IPiphany awarded the job to Applied Communications Group. Total project cost was \$ 110,000. Original estimates for installing a riser were approximately \$ 300,000. Individual demarc extensions with fiber, in lieu of a riser would have been close to \$ 300,000 as well.

### **PBX and Local Service**

With the common riser design in place, IPiphany next interviewed the tenants to determine their individual voice equipment and services needs. The tenants had remarkably similar needs:

- Main need of phone system was dial tone, overhead paging, ability to park a call
- Businesses are highly dependent on the phone. The bulk of the businesses' sales are handled over the phone.
- Limited voice mail needs
- Would like to keep current phone numbers at new facility to minimize business interruption
- Would like wireless capabilities
- Minimize capital expenditures
- Reduce rates
- Get higher speed internet access

IPiphany's analysis also uncovered a couple interesting items. Nearly all the tenants were paying extremely high local and long distance rates, but were not under any contracts. Also, approximately 20% of the tenant's phone



calls were to each other. Lastly, nearly all phone maintenance was being handled by a one-man company, and the owner was nearing retirement age.

Based on the needs of the tenants, IPiphany recommended that they strongly consider a shared tenant phone switch. The reasons for this were many:

- Since much of the call traffic was inter-company, a shared system would eliminate these charges.
- By combining their buying power, the tenants could purchase a more sophisticated system at a lower per port price than they could on their own.
- One switch could be installed faster and easier than multiple small switches.
- Common equipment gives advantages in maintenance, stocking spare parts and managing ongoing service charges since aggregation lowers all of these costs.
- Tenants are able to benefit from a redundant PBX and telephone service architecture that they would not be able to afford if they bought their own individual systems.
- Easily provides phone service for common areas such as the guardhouse on the property.
- Allows the CIPM in aggregate to procure voice services meaning that they can have PRI and T1 services rather than POTS lines. This not only drives down usage costs, it also provides each tenants with advanced features such as caller ID and addresses e911 issues.
- Built in support of wireless and voice mail. Both wireless and voice mail are options available to each tenant. These would have been cost prohibitive for the tenants on an individual basis.
- Allows bigger tenants to offload some of the cost burden; allows smaller tenants to get a better system at a lower price.

IPiphany also recommended that the tenants move all services to Focal Communications. This gives them three distinct advantages. First, the combination of using PRIs instead of POTS lines and aggregating usage drops the monthly service and usage charges by 50%. Also, Focal's number portability option lets all tenants keep their existing phone and fax numbers



for a minimal monthly charge (about \$ 25 in total for all 19 tenants). Lastly, by spreading PRI services to two different central office switches, the CIPM gets a highly redundant solution impervious to most network outages.

In order to help the tenants evaluate a shared solution, IPiphany showed each of them a summary of their current charges, what they could expect a new system to cost (some had this information already) and how a shared solution would model from a cost standpoint. IPiphany modeled these two ways: as a straight out purchase or as a lease.

For all of the tenants the shared solution gave them a better solution at a lower price. On average, per port costs were 50% less than industry accepted figures for a new system. Several tenants who had already solicited phone system bids concurred with these figures.

For phone service there was a similar result. Utilizing PRIs instead of POTs gave the CIPM tenants average savings of 50% over current bills.

Overall savings were so dramatic that one small tenant could expect his savings on phone service to cover the cost of his monthly equipment lease.

With the proven pricing model and the clear advantages of a shared system, the CIPM authorized IPiphany to issue an RFP for a PBX with the following requirements:

- 500 handsets: advanced, mid-range and basic
- Redundant switch
- Support for remote nodes through a fiber connection to support the distributed MDF/IDF riser configuration
- Paging through the phones
- Phones supported by in house wireless
- Minimum of 30 auto attendants
- Whisper page
- Park and Page
- Desk phone and cell phone to ring simultaneously
- Remote users through the internet
- Cell phone/pager notification from voice mail
- Overhead paging for 19 separate zones
- Migration to an IP based system
- Multiple line appearances

IPiphany sent the response to 12 vendors including manufacturers or dealers for Nortel, Avaya, Mitel, Nortel, Telrad, Intertel and Alcatel. The



CIPM tenants selected the Alcatel OmniPCX based on the following factors:

- Multi tenant support
- Easy IP migration
- Price point
- Ease of installation
- Remote node support
- Native wireless support
- Ease of ongoing support

The total cost for the switch was \$ 225,000 and includes nearly 400 handsets and 100 wireless handsets. Per port price is approximately \$ 500. Original estimates for a shared switch by one of the tenants was approximately \$ 800 per port with no wireless capability, or about \$ 500,000 with wireless included. IPiphany was able to negotiate with the vendor to provide 24 x 7 coverage for year one at no extra charge and extend the warranty to accommodate a staged move in schedule by the CIPM tenants.

IPiphany's role extends beyond simply identifying the solution. They also will manage the installation process and provide ongoing coordination with vendor where needed, always acting on behalf of the tenants.

### **Internet Connectivity**

High speed internet connectivity was something that all of the tenants expressed interest in. IPiphany's solution was to install a single T1 line that all tenants could share. The T1 line is also backed up by an ISDN circuit. For under \$50 per month each tenant will gain the type of high speed access that would cost over \$1000 on an individual basis.

### **Structured Cabling and Video Security**

As it did with the riser system and PBX, IPiphany helped the CIPM identify their structured cabling and video security needs, wrote an RFP, solicited and evaluated bids, awarded the project and managed the installation. The savings summary is detailed in table below.



## Summary

Item	Industry Standard Cost	Actual Cost	Savings
Riser	\$ 300,000	\$ 110,000	\$ 190,000
PBX	\$ 500,000	\$ 225,000	\$ 275,000
Telco Services	\$ 250,000	\$ 125,000	\$ 125,000
High Speed Internet Access	\$ 100,000	\$ 35,000	\$ 65,000
Structured Cabling	\$ 300,000	\$ 180,000	\$ 120,000
Video Security	\$ 400,000	\$ 200,000	\$ 200,000
Ongoing Support	\$ 300,000	\$ 150,000	\$ 150,000
<b>Total</b>	<b>\$ 2,150,000</b>	<b>\$ 1,025,000</b>	<b>\$ 1,125,000</b>

**NOTE: All figures for services based on 3 year contracts**

In summary, IPiphany's role was to determine the needs of the clients, design the right systems, procure the systems at the lowest cost possible, manage the installation and implementation of all systems, and provide a single point of contact for ongoing support. In return, the CIPM tenants gained a first-class technology structure at an extremely aggressive price.

In addition, they did not have to invest time away from their businesses in selecting, designing and managing the new infrastructure implementation.

Also, they have a flexible infrastructure that gives them all they require presently while ensuring support and a migration path for future technologies and applications such as IP Telephony and video services.

Lastly, the CIPM has all costs under a monthly umbrella including equipment purchases, service fees and all ongoing support, which eases their administrative burdens, solidifies budgeting saves on long term costs.