DATACOM

Fleshing Out The Opportunity

Whether you embrace it or ignore it, you might take low-voltage work for granted. Here's why you shouldn't!

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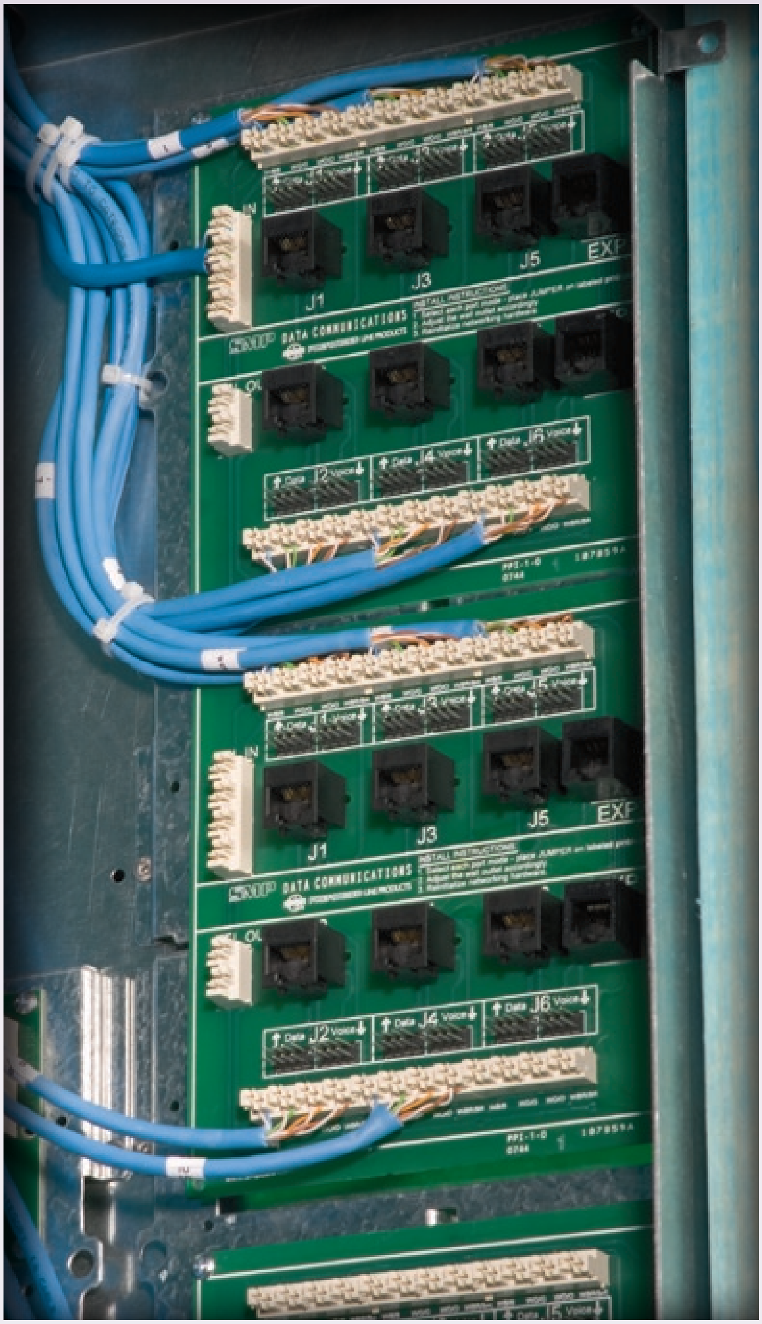
"Working smart is defined as simply doing the basics better than anyone else."

Baseball coaches know a team can never be a contender without control of the basics. In today's fast moving pace of high-tech electrical and VDV telecom services, the electrical contractor's team needs to include both.

What this article seeks to accomplish is to crystallize for the reader—be you a contractor, end-user, Rexel employee, or Rexel supplier—the precise dimensions of the "low-voltage" market.

You might take the markets represented by the words "low voltage" or "datacom" or "voice-data-video" (VDV) for granted. Or you might enthusiastically embrace them, without thinking through the opportunities you've created for yourself and your company.

After reading this article, you'll at least know what it is we're all talking about here.



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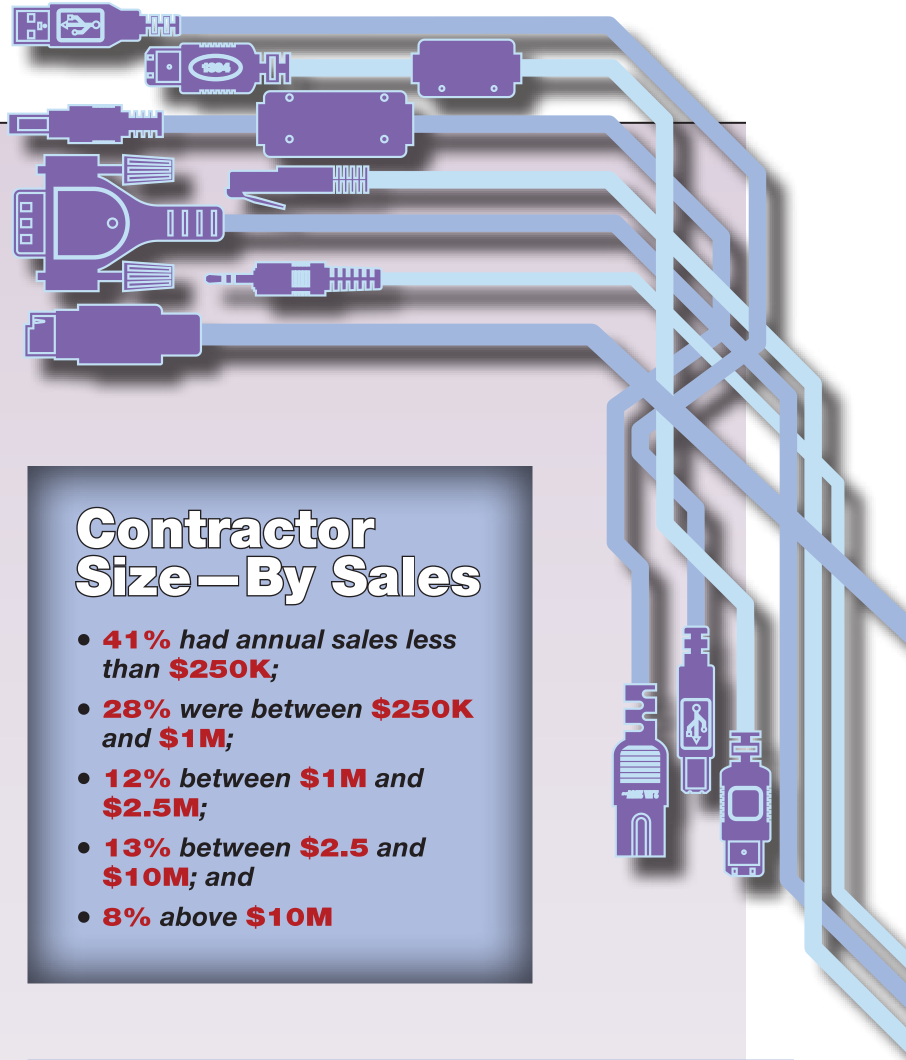
Contractors & Cabling

The following is s summarization from hundreds of pages derived from research and reports. Data consulted for this report came from:

- *Market Report for Structured Cabling 2007, BSRIA* **www.bsria.co.uk**
- *Structured Cabling Systems Market 2007, FTM Consulting* **www.ftmconsultinginc.com**
- *Profile of An Electrical Contractor 2006, performed by Renaissance Research & Consulting Inc. for Electrical Contractor magazine* **www.ecmag.com**



Contractor Size—By Sales

- ***41%*** *had annual sales less than* ***$250K****;*
- ***28%*** *were between* ***$250K*** *and* ***$1M****;*
- ***12%*** *between* ***$1M*** *and* ***$2.5M****;*
- ***13%*** *between* ***$2.5*** *and* ***$10M****; and*
- ***8%*** *above* ***$10M***

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Contractor Company Size

- ***62%*** *of electrical contractors had* ***1-9*** *employees, as of 2006;*
- ***12%*** *of EC companies had* ***10*** *to* ***19*** *employees;*
- ***16%*** *had* ***20*** *or more, up to* ***99****; and*
- ***8%*** *had more than* ***100*** *employees.*

Details About Contractors

- *Average age/owner* ***49-50*** *years old*
- *Geographics*
- *Services offered*
- ***40%*** *some college/****20%*** *college grads*
- ***30%*** *(only) formal training through JATC-like Apprentice Programs or Vocational Schools*
- ***30%*** *provide services in multiple states—more common in larger firms*
- ***96%*** *traditional power lighting*
- ***15%*** *alternative energy; geothermal/solar/wind*
- ***69%*** *CII automation/controls*
- ***58%*** *power quality*
- ***68%*** *communications systems/connectivity (telecom, security, alarm, home automation)*

Services Rendered

- *Electrical power distribution is the majority (avg. **65%**) of sales to work performed.*
- *New construction and modernization/ retrofit = majority of work (**70%-75%**).*
- *Maintenance and repair (**25%-30%**).*
- *Residential plays a decreasing role in larger firms.*

Training

- ***57%** have had training in past **12** months.*
- *Increasing to **62%** in the next **12** months.*
- *Most popular subject by **75%** is learning about NEC changes.*
- *. . . followed by courses in Safety and Grounding and Bonding.*
- *Telecom/Datacom increasing from **24%** to forecast **38%** (includes industry certifications and vendor-specific).*

Purchasing Roles

- *Fully **45% to 50%** of all size firms play some role in specification of materials to be installed.*
- *Price and availability are the primary key decision factors.*
- ***70%-75%** believe in multiple brand or "equal to" brand substitution even if specified in a RFQ.*
  *(Note: Performance-based specification, ease of installation, prior experience, manufacturer reputation represent only **25%-30%**).*
- ***75%** purchase from traditional electrical distributors (Rexel).*
- ***14%** buy from "big box" warehouse-type stores.*
- ***11%** bought from other sources.*

What This Means To You

"Insanity is doing the same thing over and over again expecting different results"

You now have a general profile of what defines the service(s) of your company. And, you should **evaluate your competition** as well. As noted, almost 70% of contractors now offer VDV value-added services to be competitive. Their strategy is to **be recognized as the "one-stop" shop** and not walk away or sub-contract out VDV services.

Based on what's above, **here's what the typical electrical contactor**—the company that makes up the majority of your competitors for datacom and other low-voltage jobs—**looks like:**

- ***9** or fewer employees, performing less than **$1M** annually in local (or regional) sales.*
- *The contractor is middle-aged, with some college education and mostly OJT in their trade or business.*
- *Most work in residential/small commercial buildings and doing new construction/retrofit or maintenance and repair of power distribution and lighting.*
- *Varied specialties in automation, controls, telecom, and security systems.*
- *Most will perform just a continuity or wire-map test and call it a day.*
- *They are in need of training and industry certifications but either can't afford the time or the expense (unless paid for).*
- *As a small contractor, most are their own specifier, making purchases based upon price and availability or what is stocked at their local (Rexel) distributor. By staying loyal to the distributor, it is found that only then do they develop "multiple-brand loyalty" **33%-35%** of the time.*

Keep in mind these two things:

1. *Electrical is a must and taken for granted.*
2. *Despite that, most end-users (your customers, if you are a contractor) make money from their communication systems . . . not their electrical.*

Structured Cabling Systems

The good news is that the structured cabling systems (SCS) **marketplace is healthy and growing**. A compound annual growth rate approaching 20% is predicted, taking the market from $6.8 billion in 2007 to $15.9 billion in 2012.

Note: These research studies vary in exact percentages but have very similar results. For the purpose of this article, most have been rounded off to the nearest decimal.

Let's look at specific HUGE niche markets within SCS.

UTP COPPER

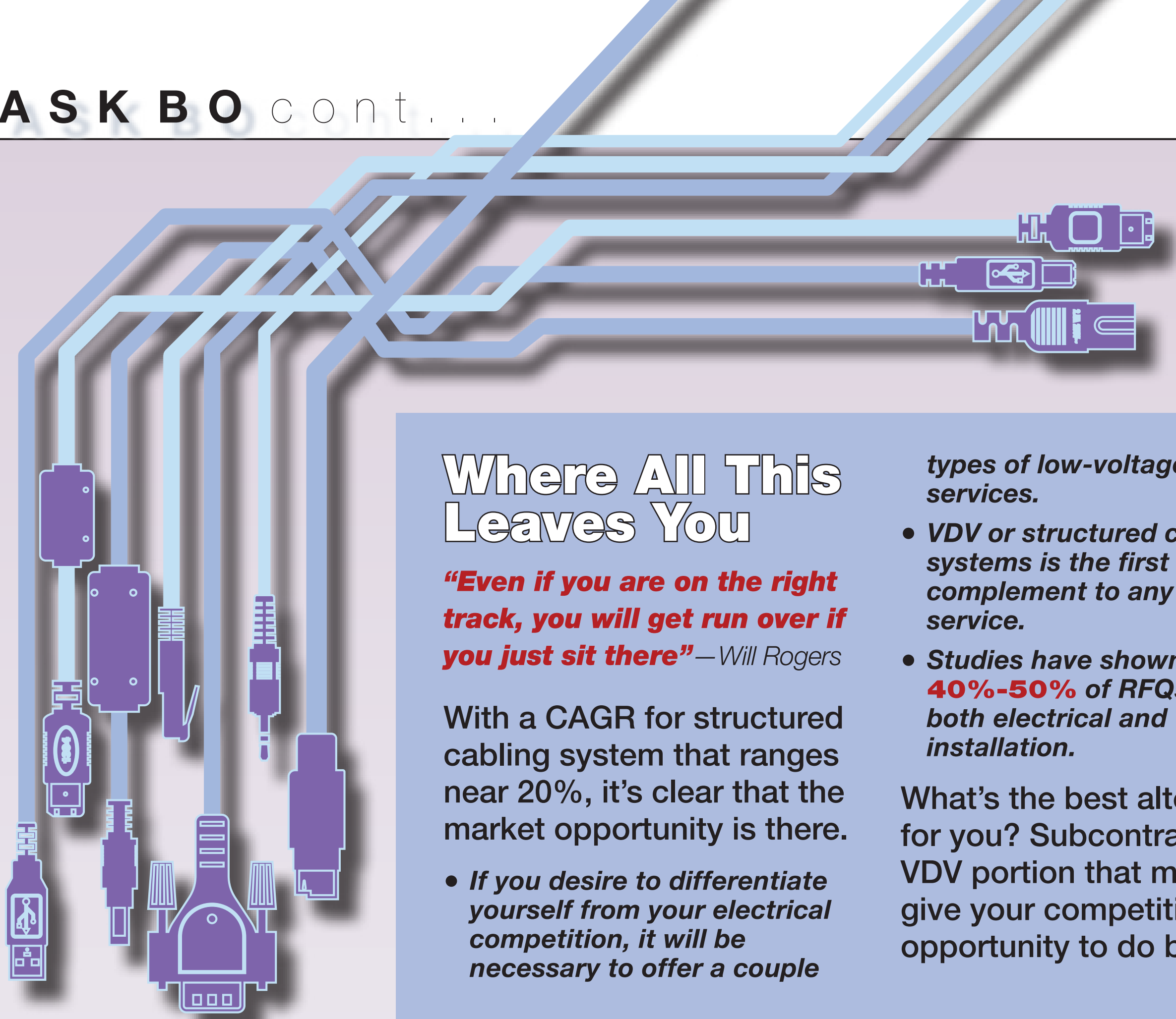
- *It's the **80-20** rule: Cable represents more than **80%** and apparatus (connectivity) **20%** (note that the labor component is not included here).*
- *UTP is forecast to grow from **67.9%** of sales (**$4.6** billion) in **2007** to **77.2%** (**$12.3B**) by **2012**. This is seen as the situation, even taking into consideration the rising cost of copper and plenum polymers.*
- *VoIP market will grow from **14.3%** of applications to **33.4%** or rocket from **$524M** to **$5.3B** in **2012** for a CAGR of **40.5%**—with **95%** still on UTP.*
- *PoE (Power over Ethernet) for WAPs (Wireless Access Points) and Video over IP on UTP remain from **10%-12%**.*
- *Data Centers will grow from **12% to 16%**.*
- *Whereas LAN applications will decrease from **64.4% to 41.4%**.*
- *Category or "Cat" 6 will dominate, having **90%-95**% of UTP market share in 2012... as Cat 5e is phased out.*

Note that Cat 7 was not included in any of these studies.

- *Cat 6A cable will have a CAGR growth rate of **11%** but still only be about **5%-7%** of the market by **2012** (UTP vs. ScTP/FTP was not differentiated in these studies).*
- *As expected, the same category comparisons are pretty much the same but slightly higher growth in Cat 6A for patch panels and outlets*
- *Coax represents less than **2%** of the SCS market and decreasing (home and commercial entertainment was not included in these studies).*
- *However, video over UTP (inclusive of Video over IP) will also skyrocket from **$21M to $152M** for a CAGR of **40.5%** and over fiber from **$155M to $440M** for a CAGR of **18.5%**!*

FIBER CABLING SYSTEMS

- *The increase of fiber optics sales is proportional to the decrease in optio-electronics and light sources—cabling/connectors are now in close price comparison to plenum Cat **6** applications.*
- *FO SCS sales will increase from $2.2B to $3.6B but its share in comparison to UTP in the overall market will decrease from **31.7% to 22.7%**.*
- *The ever-increasing use of VCSELs (vertical cavity surface emitting laser)– the higher performance of a laser at the cost of a LED.*
- *Current application is **1/10G**BaseSX (smaller wavelength **850** nm vs. **1310** nm) on **50.0/125** um laser optimized MM (multi-mode) fiber having **500** and up to **2000** MHz-km bandwidth*
- *Others include forthcoming 100 Gbps for storage area networks and Internet **2.0** using **80** wavelengths (DWDM and CWDM).*
- *The fiber connector of choice for single-strand MM and **SM** fiber is the pre-polished LC while for multi-strand ribbon style "plug and play" fiber optic cable, it is the MTP/MPO.*



Where All This Leaves You

"Even if you are on the right track, you will get run over if you just sit there"*—Will Rogers*

With a CAGR for structured cabling system that ranges near 20%, it's clear that the market opportunity is there.

- ***If you desire to differentiate yourself from your electrical competition, it will be necessary to offer a couple types of low-voltage services.***
- ***VDV or structured cabling systems is the first complement to any electrical service.***
- ***Studies have shown 40%-50% of RFQs require both electrical and voice installation.***

What's the best alternative for you? Subcontract the VDV portion that may give your competition the opportunity to do both.

Grabbing The Opportunity

Your ability to do this work—datacom, VDV, or low-voltage (whatever you call it) will require an investment. So the revenue you reap comes in the form of a return on that investment. To be a qualified VDV installer you will have invest in acquiring the proper credentials inclusive of industry and vendor-specific certifications. There's more than just pulling cable, terminating it, and doing simple continuity tests.

SOHOs or small (commercial) offices and (residential or "smart") home offices are great introductory opportunities for working with just UTP and some coax. Compliance testing and documenting are absolutes. The 15- to 30-year warranties offered by the manufacturers *start with your company*—it's the first call the customer makes when something goes wrong.

If you already are a VDV installer in commercial environments, it's time to take it to a higher level. Besides good project design and management, you must get to know the LAN application cabling and equipment requirements for such hot markets as VoIP and Video over IP—usually associated with 1/10GBaseT applications. Without question, you must also have trained fiber optic specialists dealing with the 1/10/100GBaseSX fiber optic networks.

Many in the electrical/datacom business treat the datacom end as if "it's already happened." That's not the case. It's not just "still happening"... as this article proves, it's accelerating.

Don't let it pass you by!

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