



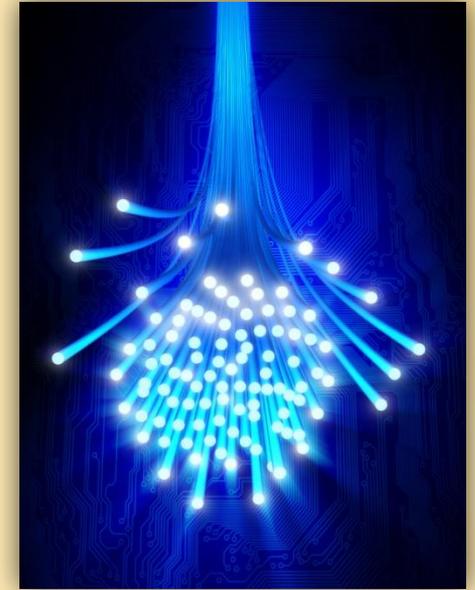
How to Pin-Point the Best Fiber Splicing Contractor

Fusion Splicing has quickly become a necessity for many network projects. This eBook provides you with the guidelines to contract the best fiber splicing technician-one that keeps your project on time and budget.

With the prevalence of fiber to the premises (FTTP) deployments to deliver increased bandwidth and speed for voice, data and video services, fiber splicing, especially fusion splicing, has become a necessity.

Getting the most precise splices ensures your network project performs to expectations and meets your highest priorities-time and budget.

Differences in equipment, environment, fibers and technique can yield different splice loss results. The best fiber splicing contractor will have the ability to manage all these factors. This eBook will provide you the insight you need to pin-point the best fiber splicing contractor for this critical part of your project.



Fiber Splicing

Fiber splicing is used to join two optical fibers. There are two ways to splice optical fiber: mechanical and fusion. Typically used for semi-permanent connections in emergency restoration situations or for testing and troubleshooting, a mechanical splice holds the fibers together with ends touching inside a sleeve. Mechanical splices are more prone to exhibit greater loss and reflection than fusion splices.

In fusion splicing, the two fibers are welded or fused together producing a strong joint with very low loss and virtually no reflection. This eBook focuses primarily on choosing a fiber splicing contractor with a forte in fusion splicing.

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Top-of-the-Line Equipment

Fusion fiber splicing was once considered a fine art and science at the same time. With advances in technology, however, a fiber splicing contractor with the best fusion splicing equipment, along with experience using the equipment, will provide the best splices.

New generation fiber splicers are capable of creating better alignment between fibers to reduce loss. These machines are also calibrated which allows the contractor to run a preliminary test to estimate the splice loss. This preliminary test, while not 100 percent reliable, will allow the technician to gage the general quality of the splice and determine whether or not to resplice at that moment instead of waiting until final testing is complete.

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Bi-directional OTDR Testing

Final testing ensures the splice meets specifications. A bi-directional Optical Time Domain Reflectometer (OTDR) test is the most accurate measurement of actual splice loss (documented in industry standard ANSI/TIA/EIA-455-8-2000 *Measurement of Splice or Connector Loss and Reflectance using an OTDR*).

OTDR is a specialized test instrument for optical fiber. An OTDR uses back-scattered or reflected light to measure loss over distance and displays the measurements in a graph or trace. While OTDR provides the ability to measure a fiber optic link from one direction, true performance can only be verified by taking bi-directional readings.

A contractor with new generation, calibrated OTDR equipment and extensive experience using the equipment to test both directions will provide the most precise splices.

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Written Testing and Documentation Procedures

When splices are made, you need to be assured the results are what you wanted. The best fiber splicing contractor, before splicing begins, will make it clear to you how, when and what kind of test results will be provided to you.

Environmentally Controlled Work Area

When performing fusion splicing, moisture, wind, dust and dirt negatively affect the process resulting in more loss than expected. A good fusion splicing contractor will have a spotless work area that controls the environmental elements no matter where splicing needs to occur.

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Experience

No matter what type of equipment a fiber splicing contractor brings to the job site, without extensive experience and technical skills that equipment will not do much good. Make sure you know the background of the contractor.

Ask for References

In general, make sure to ask for 5 references when looking to contract a fiber splicing technician. Each project is different and presents its own unique challenges. Make sure the references prove the contractor has experience working with fibers similar to yours and has a good track record of providing expected results.

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The CCI Systems, Inc. fiber splicing team has more than 125 accumulated years of fiber splicing experience. We set our standards high in effort to provide you neat and reliable splices. Our technicians have extensive experience with top-of-the line, new-generation equipment, various fibers and projects.

CCI is one of the only firms to offer truly integrated end-to-end service solutions including engineering, construction and maintenance/support.

More network operators choose CCI because of the high value they receive from the firm's exclusive Custom Solution Engineering approach.

This creative engineering service identifies your optimum solution—one that satisfies your three highest priorities: performance, cost and future upgrade flexibility.

Whether your project is small and simple, or large and complex, CCI has the expertise and experience to consistently deliver on your highest priorities.



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