

ENGINEERING NEWS

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COVER STORY

NEW LIFE FOR SINGLE-CARRIER POLES

Also in this Issue:

- Economic Upturn in 2003?
- New High Tech Equipment



REINFORCING SINGLE-CARRIER TOWERS YIELDS HIGH RETURNS

By: Jane Capriglione

In today's sluggish economy, tower owners are looking for creative ways to generate revenue. What some have written-off as lackluster performers, others are turning into profit centers.

Customer Focus

Many tower portfolios contain a large number of single-carrier poles, which were built in the early days of telecom, when co-location was relatively unheard of. The first WSP's built these monopoles to accommodate their individual capacity requirements. The goal was speed to market in dense population centers. Why allow the competition on your pole?

But times have changed. Today's telecommunication customers are demanding cost-effective tower capacity expansion to meet growth requirements for co-location and data exchange infrastructure. A Chicago area firm, **Hutter Trankina Engineering**, has stepped up to this challenge by developing and patenting a low-profile/low-cost monopole reinforcing scheme.

A Simple Idea

I recently spent an afternoon with John Trankina in his Aurora, Illinois office. I asked him how he got involved with tower reinforcing. "We have been providing structural engineering services to the telecommunications industry since the mid-1980's. Approximately 2 years ago, a client asked me to review a reinforcing scheme produced by another firm. I was amazed at the complexity and the cost. It got me thinking — there must be a more simplified solution."

The result was a very straight-forward approach to monopole tower reinforcement. Specifically, high strength stiffeners are attached to the tower at three locations. The shape and orientation of the



Single-carrier poles were the first built and, therefore, typically have premier locations.

stiffeners can easily double or triple the pole's load carrying capacity; effectively increasing the per tower income by two or three times.

Cost Effective Solution

At the same time, this low profile solution is cost-effective to implement. Typical construction costs are under \$25K, resulting in a pay-back period as short as 10 or 11 months. Mr. Trankina adds, "we have satisfied our customer's needs by accomplishing the same results as our competitors, but for a fraction of the cost. Our system costs about 25% - 30% of our market competitors."

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