Cranes are what give Thruport its lift

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Huge gantry cranes capable of lifting and shuffling six to 10 large freight containers at a time are the heart of Mi-Jack Products' Thruport concept.

Gantry cranes can be seen in use at any large rail yard in the Chicago area. From a distance, they look a little like a large, brightly colored picture frame, sometimes with a container dangling underneath.

Mi-Jack, of Hazel Crest, and Taylor Machine Works, of Louisville, Miss., are the nation's two leading manufacturers of mobile gantry cranes used in railroading and other industries.

The mobile gantry cranes Mi-Jack has designed for Thruport, would go by the name of Stack-Packer and would be some of the largest ever built. They would differ from most gantry cranes in use by having two separate "spreaders," which independently could pick up stacks of from three to five cargo containers each.

Four such cranes would be in use at a Thruport facility. Two of those, at 77 feet high, would be comparable in size to the largest currently on the market, according to design drawings provided by Mi-Jack. Two others, at 139 feet high with 10 flights of stairs attached to their sides, would rival the size of cranes used at ocean ports.

Both cranes would have a capacity of 350 tons, the same as one Mi-Jack built for use in the MX missile project of the 1980s.

The two larger cranes would be so high and so wide, at 250 feet, they could pass over the smaller 77-foot cranes. Those cranes, along with the convergence of lines for two to six rail carriers, are what would give a Thruport its competitive advantage.

They would allow the "shuffling of containers" within the rail yard, both among cars and among trains.

A fully built-out Thruport facility would be able to transfer containers at the rate of about 250 per hour, as compared to 130 containers per hour at the most efficient transfer ports now, according to a study by Jean-Paul Rodrigue, an assistant professor and expert in transportation economics and geography at Hofstra University.

"That is the elegance of it," Rodrigue said. "It is a simple idea, although the engineering is complex."

Mi-Jack founder and chairman John Lanigan Sr. compares the technological leap from current cranes to Stack-Packer to the leap from piggybacking individual tractor trailer chassis on trains to all-containerized shipping. That happened in the 1970s.

"When you reduce your handling time, you automatically reduce your costs," Lanigan said.