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Executive of the elevator division of ThyssenKrupp feels, that in time, Multi – the name given to this new innovation – ultimately would add to the speed and efficiency of elevators as well as to the way buildings are constructed.

At rival Kone, one chief executive, Henrik Ehrnrooth feels that to date, these kinds of ideas haven't been commercially viable. While Schindler's former chief, Silvio Napoli feels horizontal concepts with elevators "are not that new for the industry.

"Competitors were working on this years ago but found problems." Problems included high energy consumption. Otis in the 1990s even came up with a system running both vertically and horizontally; but its intricate system of pulleys and cables proved too complex to install, as pointed out by Dario Trabucco, resesarcher with the Council on Tall Buildings and Urban Habitat, a nonprofit standards organization.

One expert, an elevator consultant feels that ThyssenKrupp's greatest challenge comes with "developing a working system that would be cost-competitive," as well as convincing developers they should take the risk of using its unequaled and copyrighted system.

Modern single elevators carry a price tag of between $400,000 and $600,000 per shaft. Despite the Multi not being on the market yet, ThyssenKrupp feels, "the saving in reduced footprint for super-tall and mega-tall buildings is enormous and pays off easily."

But supplanting an installed elevator system could run millions of dollars – in some building they could even prove impossible. Developers eschew risk. One equity analyst with Credit Suisse predicts, "this will be a very niche market."

Whole buildings may end up needing to be designed around the ThyssenKrupp system. The analyst adds, "Evolutionary technology such as Kone's carbon-filter rope may have a bigger impact on the industry."

According to Kone, their synthetic belts – already in use – prove much lighter than traditional steel cables, therefore its system uses up less energy and costs less to maintain. Kone's UltraRope allows elevators to double the maximum shaft heights of today, which reach some 1,640 feet (500 meters). Longer shafts cut down on the demand for elevator transfer lobbies on the upper floors of buildings, thus increasing rental space.

Yet the Multi, by ThyssenKrupp also represents the first interruption from the use of wire rope cables in well over 150 years. "Rather than operating like a yo-yo, it hovers each cab vertically or horizontally with magnetic fields," explains business and technology writer Christopher Alessi.

"Floating up a tower might make some elevator riders skittish, but the average passenger is 'absolutely ignorant' about how elevators work, said Mr. Trabucco with the Council on Tall Buildings, adding, 'enticing riders shouldn't be hard if the system is fast'."

ThyssenKrupp continues to develop elevator safety attributes in coordination with building developers as well as consultants. Says one spokesperson: "We will employ multi-step braking systems on all Multi elevators. This is to handle all possible scenarios of operation."

Just as Roebling saw the seeming limitless possiblities of replacing much more unreliable hemp rope with wire rope. His first chance to put his ideas to work came with work his earliest project, central Pennsylivania's Portage Railway and Canal. Were Roebling still on the scene today, he might not be too surprised at the rise of technologies replacing even his amazingly strong wire rope, even in the elevator – an invention appearing just twelve years before his death. WRN