

HYDRAIL STREETCARS: THE RISK OF NOT

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by

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"It must be considered that there is nothing more difficult to carry out, nor more doubtful of success, nor more dangerous to handle than to initiate a new order of things."

- Nicolo Machiavelli, Italian hydrail advocate,
circa 1500

“change” and “risk”



- ◆ Everyone knows about the Hindenburg; few know about another dirigible, USS Akron.
- ◆ A sudden change of wind lifted Akron during a mooring in 1932.
- ◆ Two sailors held on to the lines too long and fell to their deaths.

“change” and “risk”

- ◆ The morals of the Akron paradigm are:
 - 1) change is sudden, unwelcome and unavoidable and
 - 2) hanging on too long, even for noble reasons, can prove risky or fatal.

catenary streetcars: the danger signs

- ◆ They've been around some 120 years; for a technology, that's ancient.
- ◆ Bordeaux hopes to eliminate at least some catenaries from scenic areas; France often sets trends.
- ◆ The emergence of hydrail around the world makes new investment in streetcar track electrification very risky.

The Good News: American cities are rediscovering streetcars;

The Bad News: they are assuming overhead track electrification is the only foreseeable option.

Catenaries are familiar, fairly reliable, quaint and colorful.

They are also tacky, hazardous, obstacles and *very* expensive to build and maintain.

the risks of hanging on to catenaries (besides electrocution):

- investing in fixed plant and rolling stock that vendors soon quit supporting;
- committing to building ever more catenary plant that must eventually be sourced from used, salvaged, high-maintenance stock;
- eventually having to sell relatively new, undepreciated plant into a shrinking, saturated market at a big loss; and...
- facing the angst of making a cut-loss decision every time rail lines need to be extended.

streetcar planners looking at trolley investments should contemplate...

- ◆ ...the buyer who outfitted the last office with expensive self-correcting typewriters...
- ◆ ...the telephone engineer who bought the last new electromechanical central office and had to justify maintaining it...
- ◆ ...the railroad that bought the last new steam locomotives, coaling towers, ash pits and watering spouts.

Technology evolves through 3 stages: **innovation**, **integration**, and **transition**.

- ◆ Vacuum tube radios continued to be built and sold for *years* after the first transistor was created at Bell Labs, BUT...
- ◆ It *instantly* ceased to be feasible to build *new vacuum tube factories* after the transistor was known to be "real."
- ◆ Extending *existing* "trolley" lines may be reasonable; planning *new* ones on the eve of hydrail isn't.

"sic transit"

