

The Hyperloop is Here—Sort of

Jack McGuinn, Senior Editor

It is unlikely the hyperloop will inspire Hollywood to start making films emulating the tried-but-true terror-on-a-train genre—a genre that includes many classics. But somehow titles like—*Lady on a Hyperloop, Strangers on a Hyperloop, Murder on the Hyperloop Express, Throw Momma from the Hyperloop, The Great Hyperloop Robbery*—just don't work. And you can forget about another venerable train travel tradition—the club car—given that you will probably reach your destination sooner than you can say “Jack on the rocks.”

But forget all that—the hyperloop is about *speed*—speed to burn (pending full funding, that is).

Boy Wonder Entrepreneur Extraordinaire Elon Musk of Hyperloop One (there's a Two and a Three elsewhere) says he has “verbal” approval from Washington to build an underground hyperloop between New York and Washington, D.C. What is normally a three-hour train trip—75 minutes by air—the Hyperloop can complete in 29 minutes—at 700 mph. The route would also include Philadelphia and Baltimore. (Musk's involvement in the project is limited to building the tunnels; it is not yet clear which firm he plans to partner with to handle the pod vehicles.)

How soon will this happen? Musk recently tweeted that there's “still a lot of work needed to receive formal (DOT, etc.) approval,” yet he's optimistic—*of course* he's optimistic, he's Elon Musk!—that it “will occur rapidly.” Defining “rapidly” is the tricky part. And if you folks living in, for example, Atlanta, Chicago, or Minneapolis are experiencing hyperloop envy—Musk implores you to contact your elected representatives and ask them to support building more hyperloops—a hyperloop hypapalooza!

Indeed, the concept-to-completion loop just got a bit tighter; in late July the company announced the “successful completion of its second phase of testing. On July 29th, Hyperloop One achieved historic test speeds traveling nearly the full distance of the 500-meter DevLoop track in the Nevada desert. The Hyperloop One XP-1, the company's first-generation pod, accelerated for 300 meters and glided above the track using magnetic levitation before braking and coming to a gradual stop.”

How does that work?

Well, a hyperloop “blasts passenger pods down vacuum-sealed tubes” (coursing) from New York to Washington—at near-supersonic speed. “The pods would rocket along rails through reduced-pressure tubes at speeds of 750 mph.”

Hyperloop One says the technology provides better safety than passenger jets, lower build and maintenance costs than high-speed trains, and energy usage, per person, that is “similar to a bicycle.”

When considering the principle upon which the hyperloop is based—it can get a little wacky.



Those old enough and Turner Classic Movies fans are perhaps somewhat aware that “pneumatic tubes (or capsule pipelines, also known as pneumatic tube transport or PTT) are systems that propel cylindrical containers through networks of tubes by compressed air or by partial vacuum. They are used for transporting solid objects (hyperloop extrapolation here: that would be *passengers*), as opposed to conventional pipelines that transport fluids. Pneumatic tube networks were popular in the late 19th and early 20th centuries for offices (think newspaper newsrooms, department stores, large banks, etc.) that needed to transport things such as mail, paperwork, or money over relatively short distances (within a building, or at most, within a city) in a very short time.” (Source: *Wikipedia*.)

And now we have—or will have—the hyperloop.

Other companies looking at the hyperloop technology include Northeast Maglev, and Hyperloop Transportation Technologies. Hyperloop One is looking to get three systems underway, according to a statement by chief executive Rob Lloyd.

Also, richer-than-Croesus DP World Group of Dubai has invested in the concept, as well as French rail company SNCF, General Electric and Russian state fund RDIF.

“Hyperloop One has accomplished what no one has done before by successfully testing the first full-scale hyperloop system,” said startup co-founder and executive chairman Shervin Pishevar in a press release. “By achieving full vacuum, we essentially invented our own sky-in-a-tube—as if you're flying at 200,000 feet in the air.”

Systems successfully tested back in May of this year include the motor, vacuum pumping, magnetic levitation, and electromagnetic braking.

And did we mention that Mr. Musk has plans to send two private citizens around the Moon?

And to land an unmanned spacecraft on Mars by 2020? **PTE**