



By Gayle Anderson, Associate Editor

It seems that the rest of world needs their clocks cleaned.

A report in the Sunday edition of the Westside Weekly section of the Los Angeles Times cited *another* transit system from a certain beach community for running buses two minutes fast. But unlike that flyaway service, the report noted, MTA's bus operations system is connected to the nation's official time.

But it doesn't come easy.

We're not talking time bomb here, but when the operating divisions clock in with Bus Operations Control Center every day to synchronize their watches, wall clocks and on-board time devices, they're getting what amounts to an atomic reaction from the Transit Operations Supervisor on duty.

No, the TOS isn't ticked off, he's merely giving the divisions the time of day from an atomic clock quietly counting atoms like sheep in Fort Collins, Colo.

"The time from the atomic clock is transmitted to an antenna at BOCC by radio signals," said Brent Howe, a senior programmer analyst in Information Systems. The radio signals are broadcast from radio station WWVB of the National Institute of Standards and Technology (NIST).

The time that runs the trains on time arrives at the Rail Operations Control by satellite rather than radio signals, said Kelvin Zan, a SCADA Systems and Control Engineer at ROC.

Somewhere in space, a satellite is beaming down data from an atomically correct synchronized clock to an antenna installed at ROC, which, in turn, sets the standard for the yard clock, servers, networks, watches and anything else with a nano-second hand and a face.



This cylinder houses one of the most accurate clocks in the world. NIST-7, the seventh generation atomic clock at the National Institute of Standards and Technology, will gain or lose about one second in six million years. Essentially, an electronic clock selects atoms in one hyperfine state and exposes them to radiation which causes them to switch to the other state. The frequency of the radiation causing the transition becomes the regular beat that the clock counts to register time. Courtesy of NIST

So there, Big Blue Bus. MTA may not get there early, but at least we get there on time.

[Back to Bulletin Board](#)

