



Heartland Science

Ohio's Legacy of Discovery & Innovation



Communications

From Greenbacks to Lexis-Nexis

Father of American Telecommunications

Theodore Newton Vail, born in Carroll County in 1845, oversaw construction of America's first transcontinental telephone system while president of the American Telephone and Telegraph Company. It became operational in 1914, and offered transcontinental service a year later. It gave AT&T an edge in long-distance telephone service that it held for almost a century. Vail was firmly committed to scientific research and in 1907 organized the famed Bell Telephone Laboratories, which had won a dozen Nobel Prizes and done research that impacted the lives of millions of people.



Transcontinental Telephone History: July 1914

For five years AT&T had placed audions (the first vacuum tubes) along some 3,400 miles of wires that connected the U.S. coasts. Because voice signals gradually weakened the further along they traveled, a boost of the signal was needed to complete a "long distance" transmission. The audions boosted the signal as it passed along the wire, and the first trial took place in July, 1914, when Theodore Vail (then President of AT&T) spoke for the first time from one coast to the other. His voice was boosted in several spots along the way. The previous record for a long distance call was from New York to Denver - but this call required those on each end to shout.

The twist to the invention took place a year later, when Alexander Graham Bell from New York spoke the words he had originally said to test the basic phone decades earlier: "Mr. Watson, come here. I want you." This time, however, Thomas Watson, was now in San Francisco, and replied, "It will take me five days to get there now!" Not many years later, in 1923, transatlantic transmission was demonstrated.

Find out more...

- [Photo of AT&T President Theodore Vail at opening ceremony for first transcontinental telephone line](http://www.att.com/history/milestone_1915.html)
(www.att.com/history/milestone_1915.html)
- [Bell Laboratories History](http://www.bell-labs.com/history)
(www.bell-labs.com/history)
- [Bell System Memorial Article on Theodore Newton Vale](http://www.bellsystemmemorial.com/bellsystem_history.html#Year%20of%20Decision)
(www.bellsystemmemorial.com/bellsystem_history.html#Year of Decision)
- [SCTE Article: History and Regulation of the Telephone Industry](http://www.scte.org/chapters/newengland/reference/Telephony/topic01.htm)
(www.scte.org/chapters/newengland/reference/Telephony/topic01.htm)