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IEEE LEHIGH VALLEY SECTION ELECTRICAL ENGINEERING MILESTONE CEREMONY FIRST COMMERCIAL MANUFACTURE OF TRANSISTOR AT&T ALLENTOWN WORKS APRIL 18, 1989

From the Newsletter of the Center for the History of
Electrical Engineering, No. 20, Spring 1989.

Transistor Milestone

On 23 December 1947, three Bell Labs physicists demonstrated a device developed during their research on semiconductors to a few of their colleagues. The transistor, as John Bardeen, Walter Brattain, and William Shockley called it, consisted of a triangular wedge of gold-foil-covered plastic whose point rested on a slab of germanium. The transistor was combined with other components to form an audio amplifier. Brattain recorded the event in his laboratory notebook, writing, "This circuit was actually spoken over and by switching the device in and out a distinct gain in speech level could be heard and seen on the scope presentation with no noticeable change in quality. By measurements at a fixed frequency in it was determined that the power gain was the order of a factor of 18 or greater." A replacement for the vacuum tube was becoming a reality.

The point-contact transistor was publicly demonstrated six months later. The *Bell Laboratories Record* of August 1948 documented the event.

An amazingly simple device, capable of performing efficiently nearly all the functions of an ordinary vacuum tube, was demonstrated publicly for the first time on June 30 in our West Street auditorium.

Known as the Transistor, the device works on an entirely new physical principal discovered in the course of

The new transistor, an amazingly simple device capable of performing many of the functions of an ordinary vacuum tube, is about to become a full-fledged member of the Allentown Plant's family of electronic products.

The Electronic of the Western Electric Allentown Plant, October 1951.

fundamental research into the electrical properties of solids. Although the device is still in the laboratory stage, it is expected to have far-reaching significance in electronics and electrical communication (p. 321).

In October 1948, the Western Electric Co. formally opened the Allentown (Pennsylvania) Works specifically for the manufacture of electronic components. A branch of Bell Labs was established at the Works, combining the talents of Bell device-development engineers with Western Electric manufacturing engineers. Under the direction of V.L. Ronci, this team orchestrated the transition from experimentation to production. The transistor went into commercial manufacture in October 1951.

On 18 April 1989, transistor manufacturing at Allentown was dedicated as an Electrical Engineering Milestone by the IEEE. Harold Nigh, Allentown Works General Manager, hosted the ceremony held at the Works. The program included talks by M. Ayman Shibib, IEEE Lehigh Valley

Section Chairman, on the Milestones program; Joseph Daddona, Mayor of Allentown, on the impact of the transistor and AT&T on Allentown; Mike Thompson, AT&T Product Marketing and Development Vice President, on the impact of the development of the transistor on AT&T; and John Beroset, AT&T MOS Strategic Business Unit, on the impact of the development of the transistor on society. Anna Kopes, who worked on the first transistor production line, recalled the preparation and start-up of the line. A luncheon and tour of the Allentown Works concluded the program.

The IEEE Electrical Engineering Milestones Program seeks to foster awareness of electrical engineering history and to preserve and document significant achievements in electrical and electronics engineering through Milestone site dedications. The Program is supervised by the IEEE History Committee and administered by the Center for the History of Electrical Engineering.

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ELECTRICAL ENGINEERING MILESTONE CEREMONY
FIRST COMMERCIAL MANUFACTURE OF TRANSISTOR
AT&T ALLENTOWN WORKS
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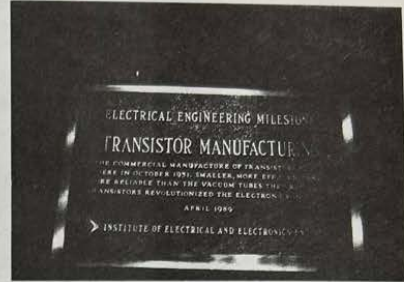


**IEEE Lehigh Valley Section Chairman M. Ayman Shibib
presented a commemorative bronze plaque to Harold
Nigh, General Manager of AT&T Allentown Works**

IEEE LEHIGH VALLEY SECTION
ELECTRICAL ENGINEERING MILESTONE CEREMONY
APRIL 18, 1989



Mayer Daddona, Harold Nigh, Louise Jacques and Ayman Shibib at the dedication ceremony, Allentown



The IEEE Electrical Engineering Milestone plaque



Mayer Joe Daddona handed Harold Nigh the city of Allentown's Proclamation of April 18th as the "Day of the Transistor"



Section Chairman M. Ayman Shibib talked about the IEEE Historical Milestone Program and its significance to the Section

LEHIGH VALLEY SECTION'S AWARDS



Reinhard Knerr received a Certificate of Appreciation from the Section Chairman M. Ayman Shibib for his contributions and efforts in the recognition of AT&T Allentown Works by IEEE as the first site of the manufacture of the transistor in 1951.



Louise Jacques received a Certificate of Appreciation for her efforts in organizing a successful Milestone Dedication Ceremony for the Lehigh Valley Section From Dave Shapiro, the IEEE LVS Northern Area Manager.