

Finding Aid to The HistoryMakers® Video Oral History with Michael Spencer

Overview of the Collection

Repository:	The HistoryMakers®1900 S. Michigan Avenue Chicago, Illinois 60616 info@thehistorymakers.com www.thehistorymakers.com
Creator:	Spencer, M. G. (Michael G.)
Title:	The HistoryMakers® Video Oral History Interview with Michael Spencer,
Dates:	August 5, 2012
Bulk Dates:	2012
Physical Description:	7 uncompressed MOV digital video files (3:32:32).
Abstract:	Electrical engineer, computer scientist, and engineering professor Michael Spencer (1952 -) is a leader in materials science and holds eleven United States patents. Spencer was interviewed by The HistoryMakers® on August 5, 2012, in Ithaca, New York. This collection is comprised of the original video footage of the interview.
Identification:	A2012_158
Language:	The interview and records are in English.

Biographical Note by The HistoryMakers®

Electrical Engineer, Computer Scientist and Engineering Professor Michael G. Spencer was born on March 9, 1952 in Detroit, Michigan. Spencer's passion for teaching is part of a family tradition, his mother and grandparents were teachers. He grew up in Washington, D.C. and travelled to Ithaca, New York to study at Cornell University. He earned his B.S. degree in 1974 and his M.S. degree in 1975. Spencer worked at Bell Laboratories from 1974 to 1977 before returning to Cornell to receive his Ph.D. degree in electrical engineering in 1981. He joined the faculty of Howard University as an assistant professor in 1984. Spencer also founded the Materials Science Center for Excellence in 1984 and served as its

director for the entirety of his career at Howard. He spent the next eighteen years working and researching at Howard, becoming a full professor in 1990 and the David and Lucile Packard Chaired Professor of Materials Science in 1999. During this time, Spencer also worked as a visiting scientist at the National Aeronautics and Space Administration (NASA)'s JET Propulsion Laboratory. In 1999, he returned to his alma mater, Cornell University as professor of electrical engineering. He served as associate dean of research and graduate studies for the College of Engineering from 2002 to 2008. Spencer directed the Wide Bandgap Laboratory where he researched semiconductor materials like Silicon Carbide (SiC) and Gallium Nitride (GaN), as well as two dimensional semiconductors like graphene. He co-founded Widetronix, a company that builds low power long life betavoltaic batteries. Spencer has written over 130 publications concerning semiconductors and has also co-authored eleven United States patents.

Spencer has received much recognition for his research and teaching. In 1985, he received the Presidential Young Investigator Award from the National Science Foundation. Spencer also received the QEM (Quality Education for Minorities) Giants of Science Award and the Allen Berman Research Publication Award from the Naval Research Laboratory. He served as one of the directors for the National Science Foundation (NSF) Nano-Fabrication Network. Spencer was a member of the program committee of the American Vacuum Society and the International Conference on Silicon Carbide and Related Materials. He also held memberships in the Electronic Materials Conference Organizing Committee and the Compound Semiconductor Symposium Organizing Committee. Spencer lives in Ithaca, New York. Michael G. Spencer was interviewed by *The HistoryMakers* on August 5, 2012.

Scope and Content

This life oral history interview with Michael Spencer was conducted by Larry Crowe on August 5, 2012, in Ithaca, New York, and was recorded on 7 uncompressed MOV digital video files. Electrical engineer, computer scientist, and engineering professor Michael Spencer (1952 -) is a leader in materials science and holds eleven United States patents.

Restrictions

Restrictions on Access

Restrictions may be applied on a case-by-case basis at the discretion of The HistoryMakers®.

Restrictions on Use

All use of materials and use credits must be pre-approved by The HistoryMakers®. Appropriate credit must be given. Copyright is held by The HistoryMakers®.

Related Material

Information about the administrative functions involved in scheduling, researching, and producing the interview, as well as correspondence with the interview subject is stored electronically both on The HistoryMakers® server and in two databases maintained by The HistoryMakers®, though this information is not included in this finding aid.

Controlled Access Terms

This interview collection is indexed under the following controlled access subject terms.

Persons:

Spencer, M. G. (Michael G.)

Crowe, Larry (Interviewer)

Hickey, Matthew (Videographer)

Subjects:

African Americans--Interviews

Spencer, M. G. (Michael G.)--Interviews

African American scientists--United States.

African American scientists.

Electrical engineering.

Organizations:

HistoryMakers® (Video oral history collection)

The HistoryMakers® African American Video Oral History Collection

Howard University

Cornell University

Howard University

Occupations:

Electrical Engineer

Computer Scientist

Engineering Professor

HistoryMakers® Category:

ScienceMakers|EducationMakers

Administrative Information

Custodial History

Interview footage was recorded by The HistoryMakers®. All rights to the interview have been transferred to The HistoryMakers® by the interview

subject through a signed interview release form. Signed interview release forms have been deposited with Jenner & Block, LLP, Chicago.

Preferred Citation

The HistoryMakers® Video Oral History Interview with Michael Spencer, August 5, 2012. The HistoryMakers® African American Video Oral History Collection, 1900 S. Michigan Avenue, Chicago, Illinois.

Processing Information

This interview collection was processed and encoded on 2/5/2020 by The HistoryMakers® staff. The finding aid was created adhering to the following standards: DACS, AACR2, and the Oral History Cataloging Manual (Matters 1995).

Other Finding Aid

A Microsoft Access contact database and a FileMaker Pro tracking database, both maintained by The HistoryMakers®, keep track of the administrative functions involved in scheduling, researching, and producing the interview.

Detailed Description of the Collection

Series I: Original Interview Footage

Video Oral History Interview with Michael Spencer, Section A2012_158_001_001, TRT: 1:29:14 2012/08/05

Michael Spencer describes his family background on his mother's side. His ancestry can be traced back to the Revolutionary War, where Richard Wall, a white Marine, and Amelia, a free African American married and settled in Charleston, South Carolina. Spencer describes Charleston and its history. His family was involved in the Free Black Society and the Brown Society in Charleston, and one of his ancestors became an alderman after the Civil War. Spencer's mother, Laura Lee Spencer, was born around 1919 in Washington, D.C. Her parents shielded her

as a child from the knowledge of racism. After graduating from Dunbar High School in Washington, D.C. she attended Mount Holyoke College in South Hadley, Massachusetts. After she met Spencer's father, Thomas Spencer, and became pregnant with Spencer she took night classes to become a lawyer.

Affirmative action programs.

Affirmative action programs.

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Video Oral History Interview with Michael Spencer, Section
A2012_158_001_002, TRT: 2:29:28 2012/08/05

Michael Spencer talks about the lives of his paternal great-grandparents, Benjamin and Sue Spencer. Benjamin Spencer became educated as a slave by attending classes with his master's son and later acquired his freedom. He received a teaching license in Kentucky. After teaching he became a shoe maker, at one time making and repairing shoes for the U.S. Calvary. Benjamin Spencer bought stocks and then lost them in the 1929 stock market crash. Sue Spencer's mother was a slave mistress to her master, the father of Sue and her sisters. Spencer's father, Thomas Spencer, was raised in Frankfurt, Kentucky. His father's education at the University of Kentucky in Frankfurt was cut short because of the birth of Spencer's half-brother. Spencer's father became a beer salesman and moved to Detroit, Michigan, where he met Spencer's mother, Laura Lee Spencer, during World War II.

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Video Oral History Interview with Michael Spencer, Section
A2012_158_001_003, TRT: 3:29:16 2012/08/05

Michael Spencer talks about his parents' early married life in Detroit, Michigan. He describes their personalities, who

he takes after, and discusses his father's, Thomas Spencer, involvement in the Socialist Workers Party. Spencer remembers the neighborhoods in which he grew up. Spencer's father passed away from high blood pressure when Spencer was in the first or second grade, which had a profound impact on Spencer. Spencer remembers the assassination of President John F. Kennedy. His mother, Laura Lee Spencer, was a lawyer in Detroit but didn't earn enough to support the family after Spencer's father died. Shortly after his father's death the family moved to Washington, D.C. so Spencer's mother could work in the Department of Housing and Urban Development. Spencer talks about the people his mother worked with and her involvement with the African American society in Washington, D.C.

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Video Oral History Interview with Michael Spencer, Section
A2012_158_001_004, TRT: 4:31:28 2012/08/05

Michael Spencer talks about his middle school, Jefferson Junior High School, in Washington, D.C. When Jefferson Junior High School had a science fair Spencer's mother, Laura Lee Spencer, contacted Dr. Herman Branson at Howard University in Washington, D.C., who arranged for Spencer to have the help of a graduate student on his science fair project. Spencer won third place for his project on ultrasound. Spencer talks about Herman Branson and his work on the structure of DNA. During junior high school Spencer spent a summer at Phillips Exeter Academy, a preparatory school in Exeter, New Hampshire, which influenced him in attending New Hampton School, a preparatory school in New Hampton, New Hampshire. Spencer describes his experiences as one of the few African American students at the New Hampton School and his visits home. He also talks about how his poor performance on an interview prevented his chances of attending the Massachusetts Institute of

Technology.

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Video Oral History Interview with Michael Spencer, Section
A2012_158_001_005, TRT: 5:30:39 2012/08/05

Michael Spencer describes his time at Cornell University, Ithaca, New York, which he attended for his B.S. and Ph.D. degrees. When Spencer arrived on Cornell University's campus in 1970, the university was reacting to the 1969 takeover of the campus by African American students. Spencer discusses the racial tension that existed at Cornell University and the African Studies Center that resulted from the takeover. Spencer also describes the African Studies and Engineering Departments. For three years during his undergraduate career Spencer was a member of the Nation of Islam, and he discusses why he joined and why he left. Between his B.S. and Ph.D. degrees at Cornell University Spencer worked and obtained his Professional M.S. degree in electrical engineering at Bell Laboratories. He describes the environment of Bell Laboratories and his work there on power convertors and powering cables.

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Video Oral History Interview with Michael Spencer, Section
A2012_158_001_006, TRT: 6:31:12 2012/08/05

Michael Spencer talks about his intercompany internship at Bell Laboratories and his time as a doctoral student at Cornell University in Ithaca, New York. Spencer's doctoral dissertation was on the effects of grain boundaries on the materials and performance of solar cells. After he obtained his Ph.D. degree in 1981 Spencer

became a professor at Howard University in Washington, D.C., where he founded the Material Science Center and researched materials such as silicon carbide and aluminum nitride. In 1985 Spencer received the Presidential Young Investigator Award from the National Science Foundation. Spencer discusses doing research at historically black colleges and universities, particularly Howard University. He describes his decision to leave Howard University in 1999 to become a professor at Cornell University. At Cornell University Spencer has researched semiconductor materials. He also cofounded Widetronix, a company that is developing a beta voltaic battery.

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Video Oral History Interview with Michael Spencer, Section
A2012_158_001_007, TRT: 7:31:15 2012/08/05

Michael Spencer talks about the prospects of Widetronix, the company he cofounded with his former student, Christopher Thomas. Over his career Spencer has published over one hundred and thirty scientific articles and eleven patents. He discusses a selection of his publications and patents. Spencer shares his hopes and concerns for the African American community and his concerns for STEM education in the United States. He also talks about his family, his legacy, and how he would like to be remembered. To conclude the interview Spencer describes his photographs.

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